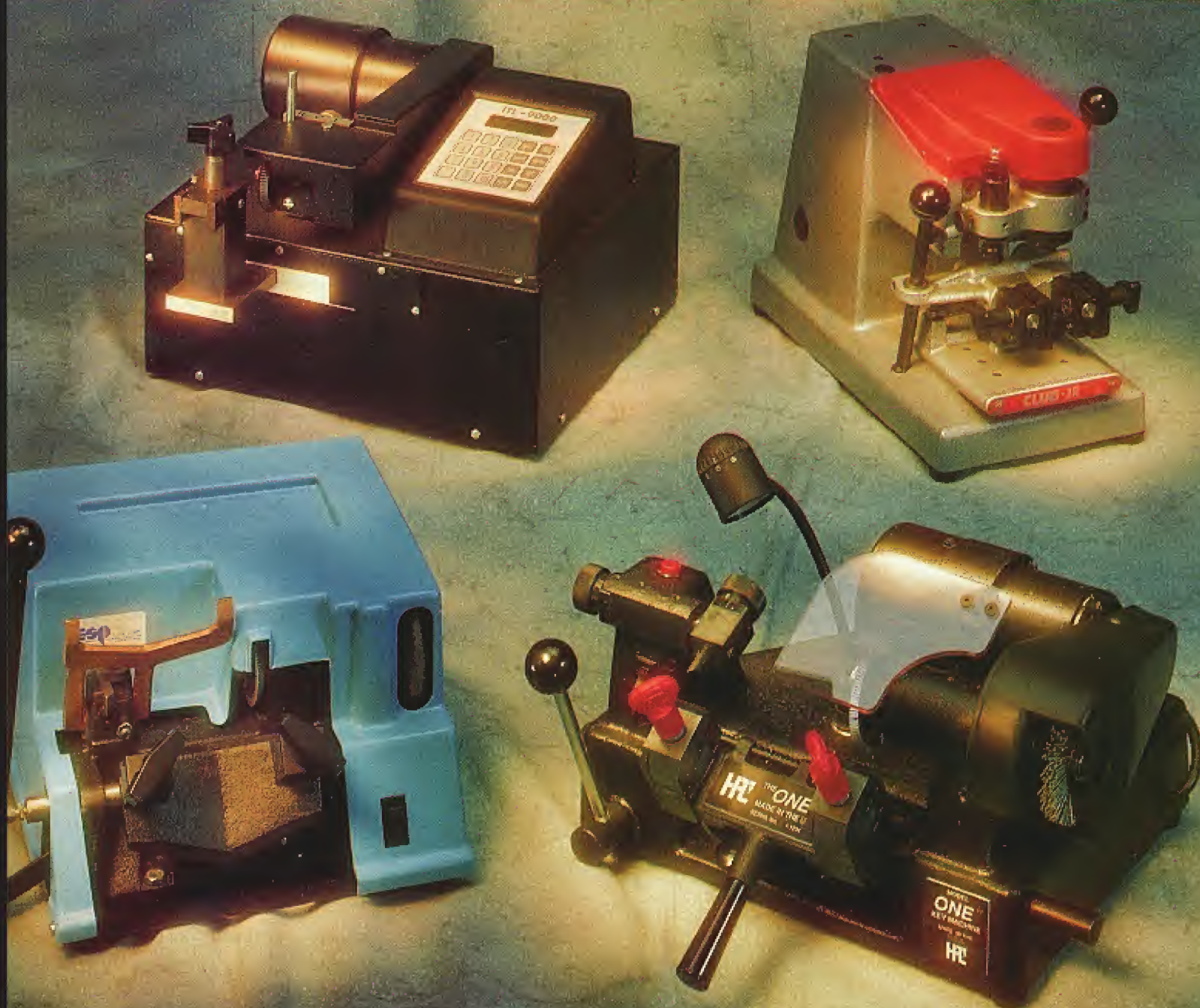


# The National Locksmith®

March 1991



Key Machines on Parade



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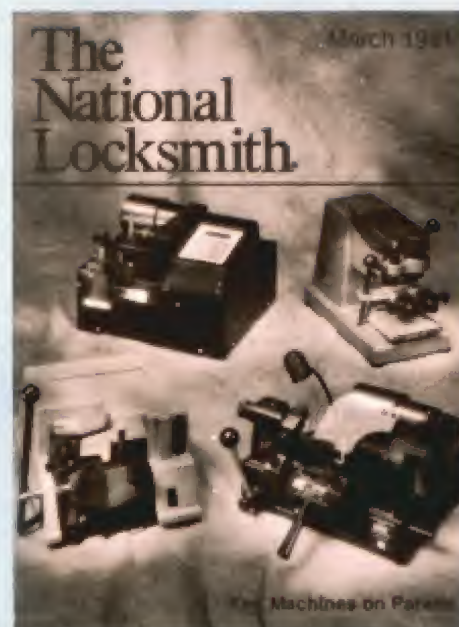
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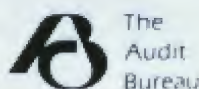
This year's Key Machine Issue features product from the following companies: (clockwise from bottom left) ESP Lock; HPC, Inc.; Silca Key Services; and ITL Tools. Look inside for more key machine products including the Product Review section beginning on page 38.

*Click on the article  
you wish to read*

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# Commentary

## Random Notes

Once again, please let me remind you that *The National Locksmith* is sponsoring two contests at this time. The first is our Funny Story Contest. To enter, all you have to do is send me your amusing (but true) locksmithing stories. We will print the best stories, and the best five entries will be awarded some really nice prizes. Get your entry in the mail no later than March 15th. Send your letters to Editor, Funny Story Contest, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

The second competition is our first annual Locksmith Photo Contest. The three divisions are: Outside View of Locksmith Shop (showing signage, window displays). Inside View of Locksmith Shop (showing counters, bench, displays, etc.). And Locksmith Vehicles (interior and/or exterior shots showing signage and inside design).

You may send us color or black and white photos. Do not write on the pictures. You may put any information you want on a label pasted to the back of the photo. You may enter as many photos and divisions as you wish. All photos become property of *The National Locksmith* and cannot be returned. Polaroid photos are *not* eligible.

The deadline by which we must receive your entries is April 15, 1991. Send your photos to Editor, Photo Contest, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Now, as to prizes, All-Lock will award prizes as follows. \$100.00 worth of product to the first place winners in each of the three categories, \$75.00 of product to the second place winners, and \$50.00 of product to the third place winners. Thanks to All-Lock for the great prizes. Additionally, we will award \$100.00 cash to the first place winners in each category. Also, the second and third place winners will be choosing \$100 and \$75 respectively worth of books from *The National Locksmith*.

Good luck and remember the deadline is fast approaching!

\*\*\*\*\*

If you are one of the lucky locksmiths who owns code books published by *The National Locksmith*, then now is update time. 1991 updates will be available soon, and you should place your order now. Simply send \$39.95 and we will ship your code book updates. Remember, you may purchase

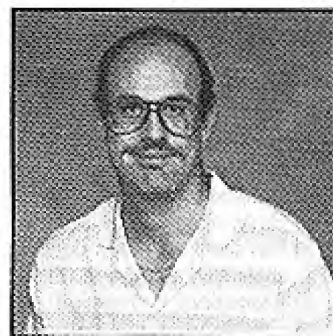
updates only if you own our code books, and for the one price, you will receive updates for whichever set or sets you own. Our records of who owns which books are based on your returning the warranty registration cards packed in with each set. If you own a set which you have not yet registered, send in your cards immediately to be eligible to purchase updates.

\*\*\*\*\*

I have recently heard from ALOA that the results are in from their membership on a survey asking about national registration of locksmiths for a locksmith permit. The results of our own survey showed an overwhelming negative reaction to the proposal. However, ALOA's survey of their membership showed much more even results. Still, it is evident that no clear mandate supporting the national permit exists at this time. ALOA is to be commended for surveying their membership. Perhaps the issue warrants more study and discussion before pursuing it any further.

\*\*\*\*\*

As of this writing, the war in the Gulf continues. Whether or not you agree with the war, let's remember that some of our brother and sister locksmiths have been activated by the armed forces and are serving their country with pride. And we are proud of them.



*Marc Goldberg*  
Editor/Publisher

March 5



# Letters

## Comments, Suggestions and Criticisms

*The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.*

### Advice For The New Locksmith

Dear Marc:

I enjoy your magazine and especially those Commentaries. Keep on writing! Keep up the good work.

I have a response to one of the letters on locksmiths who cut prices and get all the business. I direct this to new locksmiths:

I read the various comments in *The National Locksmith* magazine and you might feel that you have been shot down or put down. Well I've only been in the locksmithing trade for six years. Before that I ran a hardware store for 21 years. I work only part time now, but the first thing I decided after obtaining some knowledge from locksmithing courses and reading and doing lock work was that I was not going to undercut a fellow locksmith who has spent years at the trade and knows so much more.

Do good, quality work, be fair and polite to the customer, but don't give your profits away. You may not get the business of everyone who calls you, but the customers you get at a fair price will tell others about you.

Give your business cards out all the time and anywhere. Advice taking is the first step in growing. Read all the publications you can get your hands on. Specialize in one area of locksmithing, but continue to learn about other aspects of the trade.

*The National Locksmith* magazine is one of the best publications you can read to give you knowledge and a voice in the industry.

Don Safto  
New Jersey

### Abloy Maintains System's Integrity

Dear Marc:

Some bad news and some good news. The bad news is that one of our local locksmiths recently underwent the rigors of an Internal Revenue auction of his entire inventory of equipment and supplies. This locksmith was an authorized Abloy dealer with an Abloy Disklock key machine and blanks which were to be included in the items to be auctioned. The area Abloy

distributor and Abloy dealers were concerned that this equipment would fall into unauthorized hands. The distributor advised the company of the upcoming auction.

The good news is that Abloy authorized the distributor to purchase the equipment in order to maintain the integrity of the Abloy Security systems which have been installed in this area. The lone bidder against the distributor seemed determined to acquire the equipment but the final bid of the distributor was higher, and they acquired the machine.

Abloy Security Systems is to be commended for their action in this matter.

Jack Roberts  
Ohio

### Reader Disputes Environmental Stance

Dear Marc:

I believe you have missed the point of Linda Simeone's letter to the editor, printed in the December 1990 issue of *The National Locksmith*. The environmental issue is the plastic wrapper itself, not the magazine.

I think your reply is a weak and feeble excuse not to consider change. If  
*Continued on page 8*



Continued from page 6

someone wanted the information in your magazine, they could just as easily take the whole magazine, not just look at it.

I believe you should reconsider your response and give some real merit to Ms. Simeone's request. Even though I disagree with your response to this letter, I very much enjoy your magazine.

William Benton  
Ohio

## Saving Magazines Preserves Landfills

Dear Marc:

You can count me in as one of the 90 plus percent who keeps back issues of *The National Locksmith*. I have every issue since I have subscribed. I file them by month and year. I keep the December issues separate because I have relatively few of them. I use the index in the December issues for reference to any particular year.

My issues are an excellent reference library and I wouldn't even think of putting them in the landfill or recycling

them.

Tom Seager  
Michigan

## One City's Licensing Procedure

Dear Marc:

I will begin by saying how much I enjoy *The National Locksmith* magazine. Since subscribing, I have learned a lot about the "in's and out's" of the locksmith trade from others who have been in the industry much longer than I have.

I found the "Guest Editorial" in the December 1990 issue of particular interest concerning the registration of locksmiths at the federal level. While I am not familiar with all of the pros and cons, the concept of having some type of standard seems to merit consideration, at least.

I would like to comment on the author's statement that "any person can become a locksmith in this country simply by deciding for themselves that they are one." While I cannot speak for other localities, I can say that the city of Ocala, Florida is quite strict in it's licensing of security technicians.

Following is the procedure I had to follow in order to practice the locksmith trade:

Before I could apply for a city and county occupational license, I first had to go to the police station and apply for a security technician permit. In order to do this, I had to satisfy one of two requirements. I either had to be employed in the locksmith profession for a period of time, or be a graduate of some kind of locksmith course or school. Then I had to pay an initial one hundred dollars, which included being photographed, fingerprinted and having a character reference and background check. After more than a week, I received my permit, complete with my picture, which I must carry with me at all times. This must be renewed each year.

As you can see, this city does have stringent regulations concerning the securities industry. I would like to hear from other locksmiths concerning any experiences they may have gone through which would serve to help all of us. Thank you.

Jack Jackson  
Florida

Continued on page 10



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Continued from page 8

## Support Voiced For Locksmith Laws

Dear Marc:

This letter is in response to a letter from John Clymer II of Massachusetts in the July 1990 issue, about setting up locksmith laws.

The last line of John's letter states, "My plumber won't come out for less than \$65." This is true, but he did not tell you that in Massachusetts there is a law that requires that all plumbing must be done by a licensed plumber. The same is true with doctors, lawyers, electricians, nurses, and many other professionals. Any of the above and others, if they want, can do locksmithing because there is no law. The government does not recognize the seriousness of allowing a tow truck driver or cop to open an auto, a hardware store to masterkey locks, or of carpenters to install a deadbolt.

With proper laws we, like Mr. Clymer's plumber, can charge \$65, without the thought that our prices will keep us out of the general locksmith field, as anyone can legally offer

locksmith services.

The control of what type of person can possess locksmithing tools should be considered also. In my state, the prison department let a convicted prisoner take a locksmith course and they let him practice locksmithing when he got out of jail. He would reset or replace locks during the day and by night he would return to do burglaries. A law would stop this practice. It would also stop the locksmith mail order schools from sending "How to" information to just anyone that sends in a check.

Douglas Hagstrom  
New Hampshire

*Editor's Note: No law will ever eliminate your competition from carpenters and tow trucks. Just learn to be better than them. It's the only answer!*

## Strong Opposition To Locksmith Licensing

Dear Marc:

I see some self-serving groups are

still going "gung ho" to get all locksmiths sucked into the bureaucratic mess of federal licensing! I know this sounds enticing but just remember it is just another way of encroaching on our freedom. Freedom is what America is supposed to be all about and we are losing it daily with stupid laws, rules and regulations.

For an example of the mess one can be drawn into, look at what has happened to the nurses of Florida. They got sold on the idea that our nurses had to have so many college credits a year to renew their licenses. There will soon be a shortage of nurses here because of a situation like my wife is in. She dropped out of the system because she actually got sick of paying for courses she neither needed nor wanted and in most cases she found that she knew more than the individual teaching the credit course.

The same thing is going to happen to locksmiths when they start setting up expensive and time consuming dictated courses for locksmiths in order to renew their licenses. I am now (thankfully) retired, but I can't help but feel sorry

*Continued on page 84*



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# Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Robert Sievoking

*Congratulations to all those who find their Technitips printed this month. It was a pleasure to read all the ideas that were submitted. I finally got some of the backlog of letters answered that had been stacking up over the past year. I am sorry that I haven't had time to answer everybody's Technitip entry letters, but I operate a full time locksmith business, along with my writing duties here at The National Locksmith. Though the response time to your letters has been slow, don't think for a minute that your participation is not appreciated.*

*Last month I wrote an article on how to increase your business. A part of that article spoke directly to "good telephone technique." This last month I ran across a little clip that I felt was so*

*good that I wrote it on a piece of paper and taped it above the phone in the shop:*

*"People want to know how much you care, before they care how much you know."*

*It has been my experience that, contrary to the book title, "Nice Guys Finish Last," nice guys are never finished. By caring that your customer receives the best and most timely*



## Win a VATS Decoder From All-Lock!

Each month, All-Lock will award one of their A-7000 VATS Decoders and an A-7001 Adaptor to the best automotive Technitip submitted this month. If you would like a chance to win a free decoder and adaptor from All-Lock, simply submit your automotive tip exclusively to *The National Locksmith*. Tips submitted to other publications cannot be considered.

All-Lock's A-7000 makes it easy to diagnose system failures, service the column and select the correct key blank. This sophisticated tool is easy to use and is completely portable. Long wire leads are easy to use in cramped automotive situations.

Submit your tip, and win today!

*service possible, at a "fair" price, you will never run out of work. By handling your customers with a giving and caring attitude, they'll multiply beyond your wildest imagination. In a world filled with uncaring, self first, surly, snatch the money away from the customer, faceless people, you will stand out like a saint.*

*After reading all the Technitips this month, I was impressed with the fact*

## How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sievoking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will not be eligible! So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1991? Enter today! It's a lot easier than you think!

## Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

## Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.



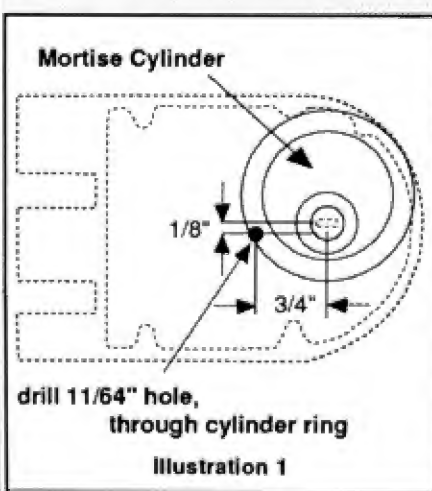
that they all "shared" some little piece of information. Thank you for your participation, and write again soon.

### March's Best Tip

When faced with the problems of being locked out and there is a Jimmy Proof lock which either will not work, or cannot be picked, for one reason or another, this Technitip will find good use. Sometimes the actuator in the case becomes bent or worn to a point where it will no longer operate the bolts. In other cases the lock cylinder may be a pick resistant type and not worth the time necessary to defeat it. If the cylinder is also drill resistant, you suddenly have a real problem.

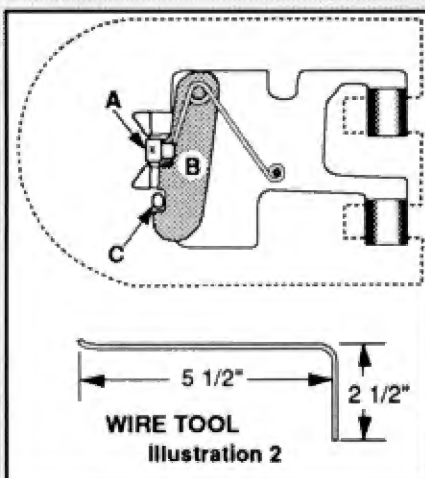
By bypassing the cylinder all together, it would be quite easy to open the lock, but in most cases the damage to the door would be a major reason to avoid this method. My Technitip is a method of bypassing the cylinder without serious or even noticeable damage to the door. I have experimented with various ways of opening this type of lock and have found this method to be about the best.

Illustration one shows the outline of a J.P. lock on the inside of a "right hand" door. This example will center around a right hand mounted lock, but by understanding the principle, you will find it an easy task to reverse the instructions to open locks mounted left hand. An 11/64" hole is drilled through the cylinder trim ring and door, at the point indicated. The drill point is 1/8" below the center of the "lock plug," and 3/4" to the left of the cylinder. Drill through the door to the metal plate, which will be the back of the lock case. Carefully



drill through the back of the lock case, without drilling into the mechanism.

Illustration two is a rear view of the locking mechanism in the locked condition. The drill point (hole hidden in this view) is shown at "A." The wire tool, shown in the same illustration, is inserted into the hole with the slightly curved tip pointing away from the edge of the door. The tool will enter the rear of the lock case and slide behind the locking lever. By rotating the "L" end of the tool in a clockwise direction, the tip of the tool will force the lever (B) back, bypassing the fence (C) and freeing the bolt plate to move in an upward direction.



Once the bolt bar has been moved as far as the tool will move it in one rotation, put a pulling or pushing pressure on the door to prevent the bolt plate from snapping back. Get another "bite" with the wire tool to slip the bolt plate farther up, and again put tension on the door to hold your progress. By "walking" the bolt plate up in this manner, the lock can be opened quite easily.

After the door has been opened, plug the hole in the door with a large wood screw, cutting the head off flush with the outside of the door, and replace the trim ring to complete the door repair. If you sell hardened cylinder protectors or door plates, this would be a great opportunity to explain the necessity and increase your bottom line with a little extra security.

Fred Spencer  
Pennsylvania

\*\*\*\*\*

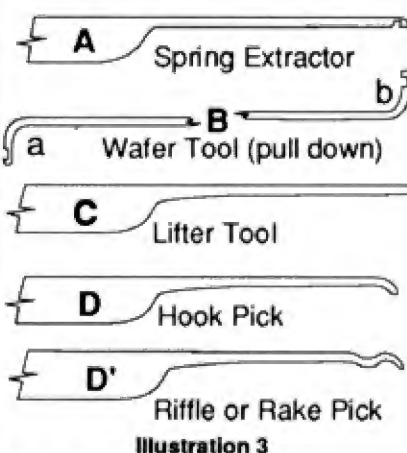
### Automotive Tip of the Month

This tip is the winner of the All-Lock A-7000 VATS Decoder and the A7001 Adapter. All-Lock will award this package to the best automotive tip each month of the year.

Picking the Ford 10 wafer sidebar lock has been a challenge, but the following method and tools have been used with great success by this shop. The principles used in this tip may not be entirely original, but the success rate achieved by the method deserves your attention.

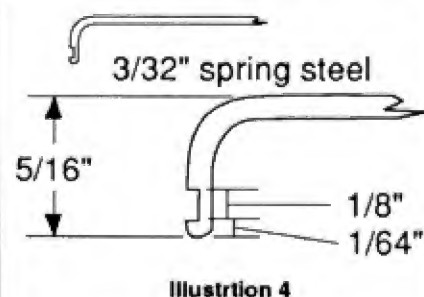
Before beginning this procedure, tools A, B, and C, shown in illustration three must be made. The illustrations are slightly smaller than the actual

### Ford 10 cut Pick System



tools, but they give an accurate idea of the way they should look when complete. The tools were all made from standard picks. Tool "A" is the "spring extractor." The notch in the tip was created with a Dremel "abrasive cut-off wheel." (15/16" x .040) The slots in the tips of tool "B," the wafer pull down tool, were also made with the cut-off wheel. Illustration four gives a better idea of the dimensions and shape of tool

### "B" Wafer Tool Detail



"B." Tool "C" is a lifter tool, and is a standard pick, with the tip cut off and

Continued on page 16



Continued from page 14

rounded. You may want to "thin" the tip slightly, to allow more free movement in the keyway. The hook and ruffle picks are shown as examples, to avoid confusion in the following instruction.

**Step 1:** Use tool "A" to remove the wafer springs. Insert the tool above the wafer, but below the spring. Turn the tool to lift and hook the bottom of the wafer spring. The bottom of the spring can be lifted off of the wafer and pulled out the front of the lock. After the spring is gone, the wafer can be lifted to allow access to the next wafer deeper in the keyway. Remove all six wafer springs from the lock.

**Step 2:** Using end "a" of tool "B," reach to the rear of the keyway. Bring the tools forward (out of the keyway) slightly, with gentle upward pressure. The tip of tool "B" will enter the cavity between wafers 5 and 6 (this lock will be considered a six wafer cylinder, cut #6 being at the tip of the key). Push in on the tool to "capture" wafer no. 6. Pull it down, into the keyway, as if it were being pushed by a wafer spring. Disengage and remove tool "B" from

the lock. Reverse the tool, end for end, and insert end "b" into the keyway. It will not go past wafer 6. Lift the tip of the tool between wafers 5 and 6 and pull out on the tool (gently) to engage wafer 5. Lift up on the end of the tool to pull wafer 5 down into the keyway. Continue to use end "b" of the wafer tool to bring wafers 5, 4, 3, 2, and 1 down, in this order. You should now have all the wafers in the down position.

**Step 3:** Insert tool "C" above the wafers (through the portion of the wafer that would normally house the wafer springs. As you push tool "C" to the rear of the lock, you will force all the wafers to their fully extended or down position.

**Step 4:** Use tool "D" (or D') to complete the picking process. Insert the tool into the keyway, not touching the wafers, until the pick contacts the rear of the keyway. Use "super light" picking pressure to feel out the tension of each wafer as you withdraw the pick from the keyway. You will be able to feel those wafers that have engaged the sidebar. If the wafer is raised above the point where it would engage the

sidebar, use tool "B" to draw it down into the keyway, and repeat the picking process. A second method to use after the picking process, to bring a wafer down, would be to "lightly tap" the top or bottom of the lock face cap with a plastic faced hammer. Tapping in an upward, then downward, direction will vibrate the wafers into proper alignment to accept the sidebar. The tapping method may not seem as positive as picking, but the vibration seems to affect only those wafers that are not already picked. Those that are captive at the sidebar will not be disturbed. Turning tension is not required, or desirable, as the wafers are being manipulated. Turning tension will actually prevent the sidebar from acting on the wafers. After the lock is picked, the cylinder can be removed for service.

This method requires that the ignition cylinder be serviced, to replace the wafer springs removed in step 1, but eliminates the need for drilling the cylinder. With a little practice, the process will not require more than 30 minutes, including making the doors.

Rick Sullivan  
Texas



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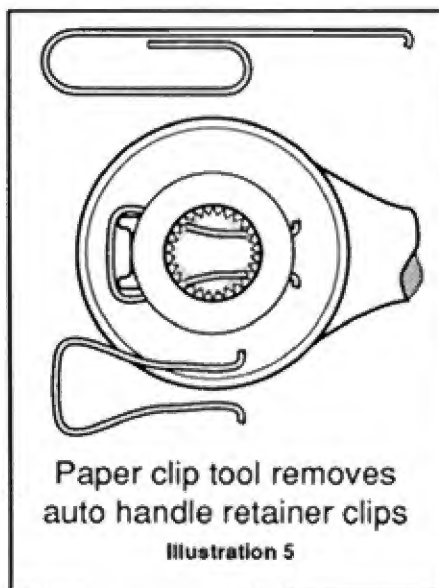


*Editors Note: In all cases of replacing lost keys that require the ignition to be removed, it should be noted that to preserve the security of the vehicle, a new ignition or recombined old ignition should be installed. The only exceptions are, those vehicles that have door/ignition keyed alike systems. The last four cuts of the Ford autos can be easily changed without spoiling the door/ignition keyed alike system. This rule will also prevent any "list keepers," at the dealership or at some central agency, from dispensing keys or codes for the vehicle.*

\*\*\*\*\*

Recently I was called to service a door lock on a late model GM auto. After beginning the job, I realized that I had lost, or at least forgotten, my handle clip tool. In order to remove the door panel, I had to get the wire clip under the window regulator handle out.

The simplest solution, at the time, was to find a piece of stiff wire and bend a small hook in the tip, to grab the clip and remove it from the handle. A



Paper clip tool removes  
auto handle retainer clips

Illustration 5

large paper clip was fashioned like that shown in illustration five. Slipping it under the rear side of the door handle, it was an easy task to snatch the clip out of the handle, releasing the handle from the door. Small ears, under the handle hub hold the clip away from the handle, making it very easy to remove with this type of tool. In some cases, a wire hook tool is easier to use than the more

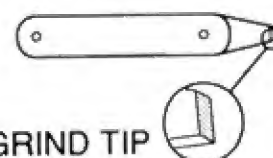
common flat metal pusher style clip removal tools.

Richard Holliday  
Illinois

\*\*\*\*\*

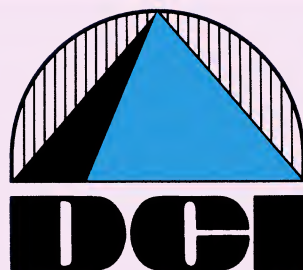
This Technitip involves removing the staking on a Ford or GM lock cylinder. When it is necessary to remove the spring retainers of these locks, for service or rekeying, it is very often nearly impossible to get the new spring retainers into the same holes that the old retainers came out of. This is because the "staking," which held the original retainer in place, has not been removed. The tool shown in illustration

#### UNSTAKING TOOL FROM A BROKEN PICK



GRIND TIP  
TO A CHISEL POINT

Illustration 6



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six is made from the handle of a broken pick. By grinding the tip in "chisel" fashion, as shown, it can be used to spread the staked corners of the cylinder to receive the new spring retainer. Use a small hammer to tap the tools into the staking pockets at both ends of the spring retainer. This will allow a new retainer to easily slip into the pockets for restaking.

Grind a flat square tip on your large automatic center punch, to stake the new spring retainer in place. This eliminates the need for a third hand when holding the retainer in place and staking the corners.

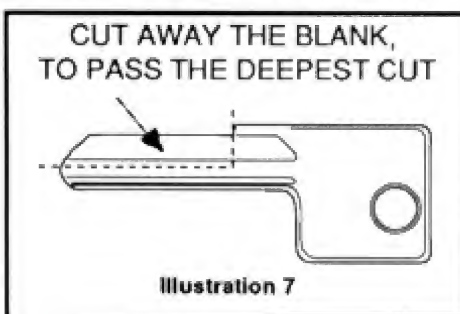
Michael Mueller  
Ohio

\*\*\*\*\*

This Technitip concerns a special key blank to turn a lock plug that must be rotated more than 180 degrees after picking. I had to pick the lock on a narrow stile glass door the other day. The lock was an Adams Rite swing-up type bolt. Picking the lock was not a big problem, but the cylinder had to be picked around, a full 360 degrees, to release and retract the bolt. As the lock was picked and turned only 180 degrees, the top pins, or drivers,

dropped down into the back of the keyway in the plug, preventing the plug from being turned far enough to unlock the door.

Though this is not a serious problem, I had anticipated it, and carry a cut down blank for just this type of situation. The blank, shown in illustration seven, is cut down, over the length of its blade, to pass the deepest possible cut in the cylinder. This can be done in a code machine quite easily. Slide the milled down key into the picked plug, to push the drivers up, into the cylinder, and the plug will be free to turn. If you are working on a cylinder that you know to be masterkeyed, the key should be placed into the keyway before the plug is turned far enough to loose the top pins. This will prevent a thin master wafer from dropping into the keyway or becoming jammed.



A second tip concerns the loss of a Weiser plug retainer pin spring. Somehow, while rekeying a Weiser deadbolt cylinder, the little spring had escaped and search as I might, I could find it nowhere. Faced with the necessity of completing the job and being on my way, I searched the truck for a suitable substitute. I finally came up with a dandy solution. The wafer springs from a GM sidebar lock will work just fine. Though original springs are by fare the best solution to this problem, the GM springs will substitute without affecting the operation of the cylinder.

Juanita Ramsey  
Texas

\*\*\*\*\*

Since GM's introduction of the Beretta, most locksmiths have acquired and use an under glass tool to safely open these autos. The 1991 Beretta, and some other GM models have been redesigned in the area of the door locking button, to make some of the earlier tools ineffective in reaching or manipulating them. Before being called to one of these newer cars for a lockout,

*Continued on page 20*



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Continued from page 18

check your under glass tool to make sure that it will reach the lock button. The newer tools will open the older autos, but the older tools will not open the newer door styles. The new lock buttons are 5-1/4" down from the top of the door panel. Check your tools to make sure you're prepared.

Willie Ray Bowen  
Virginia

\*\*\*\*\*

This Technitip is specific to the Sargent 8 line locks. The clip at the rear of the lock cylinder of the Sargent "8 Line" cylindrical locksets has been known to slip around on the rear of the plug, preventing the proper key from being fully inserted into the plug. This of course prevents the lock from operating properly and can cause a lockout. The simple solution for this type of problem is to cut or file the rear of the key, as you can see in illustration eight. The key can then be fully inserted

### Sargent 8'Line Lockout

caused by slipped plug retainer clip

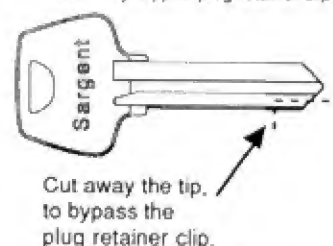


Illustration 8

into the cylinder and the door opened. Replace the defective clip.

To prevent this type of lockout, always check the tension of the plug retainer as the lock is being assembled. If you do much work on this type of lock, you should carry spare plug retainer clips. Squeezing them with pliers to restore the tension is not recommended.

Michael Aug  
New York

\*\*\*\*\*

A customer recently brought in a Abus 80/45 rekeyable padlock that was giving problems. I found it impossible to operate the lock with the key or to loosen the pins with lubricant. I also found that replacement cylinders for these locks are not available. You have to buy the whole lock to get another cylinder. This made it necessary to find a way to open the lock without destroying the cylinder. After studying another padlock, this is the method I devised.

From illustration nine, drill an 1/8" hole, centered on the side of the padlock, 3/4" down from the top of the lock body. (This is the side of the lock the cylinder springs are on.) Probe the lock case with a paper clip size wire

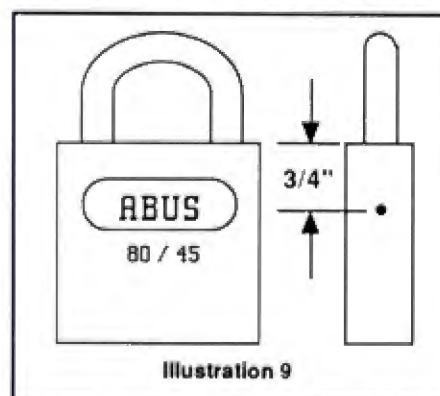


Illustration 9

Continued on page 84



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# News-makers

## New Products and Industry News

### Buddy's "Key Caddy" For File Drawers

Secure 100 keys in just 2 inches, with the Hanging File Key Caddy from Buddy Products. The Key Caddy slips in and out of your locking file cabinet or desk drawer quickly and easily.

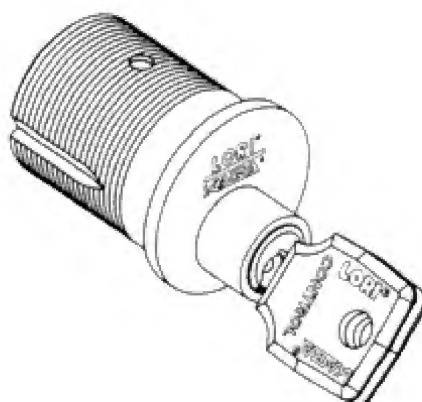
Designed to fit any standard "Pendaflex" type hanging file system, each caddy holds 50 keys on durable molded plastic key tags with plastic snap hooks. Textured steel construction is standard, in letter or legal size.



### The Lori Kaba Round Interchangeable Core

Lori Corporation announces the Kaba round interchangeable core. It offers all the patented key control and security of Kaba's precision dimple key mechanism. Because the Kaba core is round, it will fit into most existing key-in-knob locksets with no modification or costly replacement of the lock. A separate part is added inside the knob to secure the core.

Rim and mortise cylinder versions round out the product line. Kaba IC can be mixed with non-IC Kaba products in the same system with no loss of combinations.



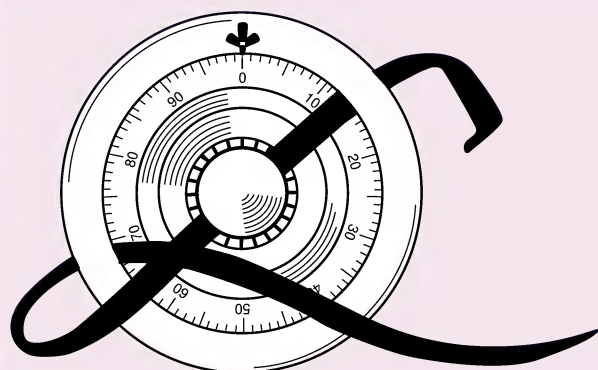
### Abby Training In Alarm Repair

Abby System of Alarm Repair, located in New York, has made available to the locksmith trade, an alarm repair course. The skills learned allow the locksmith to increase his revenue without having to invest many additional dollars into the business.

The author of the course has been associated with a well known locksmith and alarm company for twenty-five years, and the concept makes good sense. Locksmiths are a natural source for alarm repair since they have already been in the customer's home and have their confidence.

The alarm repair business extends the security coverage and can increase the locksmiths income significantly. There is no need for additional employees or equipment other than the course and a few tools.

Abby's low cost training method takes you step-by-step from the beginning through all phases of alarm repair. In addition, it offers you technical assistance while you are on the job site to talk you through any difficulties you may encounter.



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Continued from page 22

### A-1's KCAD 500 VATS Key Decoder

A-1 Security Manufacturing is pleased to announce the KCAD 500, a pocket-sized, battery operated VATS key decoder. There are no wires, alligator clips, or gauges. After inserting an original key into the side of the unit, an LED display indicates the appropriate VATS keyblank.

The interrogator is small enough to fit in shirt pockets.

Circle 413 on Rapid Reply

### Aero Lock Announces Cavalier Tryout Set

Aero Lock announces their tryout key set #TO-55 for the new Chevy Cavalier ignition. There are 225 keys to operate Chevy Cavaliers using Ilco P1099/Silca GM29.

The set comes boxed with 21 rings of keys separated by the number of codes each key on the ring is designed to open. Each key is stamped to correspond to the accompanying instructions and code chart.

Circle 414 on Rapid Reply

### Von Duprin Introduces Electric Strike Line

A new line of electric strikes, now being introduced by Von Duprin, Inc., is based on the firm's line of proven 3000 Series and ANSI-dimensioned 3100 Series strikes, which it replaces. The new Von Duprin 6000 Series electric strikes also are a direct replacement in both fit and function for the Folger-Adam 300 and 700 series electric strikes.

All strikes in the series, with a few exceptions, will drop in to replace another strike without modification. Through extensive tests, Von Duprin has assured compatibility with most major manufacturers' locks, as well as with mortise, cylinder and rim exit devices, and has confirmed their physical compatibility in the engineering laboratory.



Circle 415 on Rapid Reply

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Continued on page 27



Continued from page 24

## Amsec's Digital Keypad Lock

Amsec's digital keypad lock, the KPL100, is one of the first retrofitable electronic lock in the industry providing all the features necessary for consumer acceptance.

Consumer preference for digital keypads vs. mechanical controls has been growing for years. Safe manufacturing companies have been adding digital keypads for years, but technology and cost has been a problem.

Amsec started by reviewing the performance of existing digital locks, and came up with a design to improve upon them.

Amsec's digital lock features a contemporary design, is easy to set with



combinations from 4 to 8 digits giving over 100 million possible combinations, and offers security (after 4 incorrect input attempts, lock will not accept another combination for 15 minutes). Easy maintenance, long life, and easy installation are also important features.

Circle 416 on Rapid Reply

## Monaco Lock's 1991 Catalog

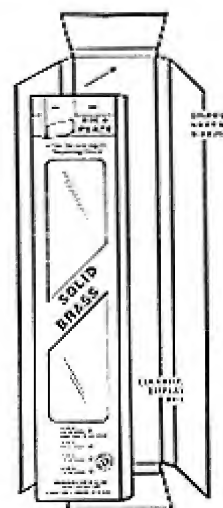
Monaco Lock Company introduces its newest catalog for 1991. Their popular "handbook" for the security industry includes a complete line of electric strikes, electro-magnetic locks, electro-mechanical deadbolts, door hardware, and accessories. As always, the catalog includes product descriptions, technical data, and dimensions needed to assist you when preparing a job or ordering.

Most items found in the catalog are in stock and ready for immediate shipment.

## Kick-Plate Series From Don-Jo Mfg.

Don-Jo Mfg., recently introduced a series of kick plates manufactured in either polished brass or stainless steel.

This series features innovative packaging combining the beauty of a colorful display package and the sturdy construction of quality corrugation, resulting in a kick-plate and package suitable for off-the-shelf shipment from warehouse to showroom for immediate display.



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# The Club Jr. By Silca

"The versatility of the Club Jr. machine will really surprise you. It is designed specifically for the duplication of special high security keys."

by Robert Sieveking

**B**ecause a locksmith's "stock in trade" is his service, or rather ability to give service, it is becoming more and more necessary for the knowledgeable locksmith to increase both his knowledge of the new locking systems that are available and to equip himself to service the greatest number of them. If you have read the trade journals faithfully, you will be aware of some of the new high security keys that are "standard equipment" on the BMW, Saab, Porsche, Lexus, and Mercedes. I've written articles lately on a number of the new high security locks available to the trade. Each derives a portion of its security from the uniqueness of the key or key cutting equipment necessary to service the locks.

The Club and Club Jr. machines are designed specifically for the duplication of "high security special keys." I have owned a Club machine for a number of years, and acquired it specifically to duplicate Kaba dimple keys. I have also duplicated an occasional Keso (Sargent) dimple key, but the primary money maker for this machine has been Mercedes two and four track high security keys.

Until recently, I had no idea of the number of adaptors available for the Club machines. The 5, 15 and 45 degree adaptors are not needed for the Club since it has built-in rotating jaws. They are, however, needed for the Club Jr. The versatility of the Club Jr. machine will definitely surprise you.

Two questions that this article will address are: What are some of the features of the Club Jr. machine? and What "basic" adaptors are available, and what are their primary applications?

The key machine shown in photograph one is the new Club Jr. high security special key duplicator. It is being introduced to the North American market as a more economical version of its big brother, the Club. For those not



1. The Club Jr. key duplicator.

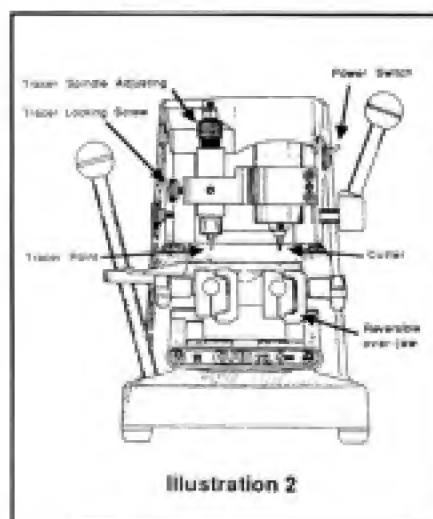


Illustration 2



3. Loosening key vise handles.

familiar with the Club Jr. machine, illustration two shows the basic configuration of the machine.

The handle on the left side of the machine allows the locksmith to move the carriage in a two dimensional plane. The carriage, which holds the pattern key and the blank, can be freely moved left or right and fore and aft. Much like the compound table of a milling machine, the keys can be positioned to any point within the travel limits of the carriage. The handle on the right side of the machine controls the height of the spindle. By pulling forward on the handle, the quill, which includes the tracer point and cutter, is brought down, to contact the keys.

The Club Jr. machine is a little easier to adjust than its big brother. The tracer point is not spring loaded, but is positioned by a positive motion "tracer spindle adjusting screw." By turning the screw clockwise or counterclockwise, the tracer point can be very accurately positioned vertically, to match the height of the cutter being used. The tracer point and cutter are held in their respective chucks by metric socket head cup point set screws. After adjusting the tracer point stylus to match the height of the cutter, the "tracer locking screw" is tightened to prevent the tracer spindle from losing its adjustment.

Changing the cutter and stylus (tracer point) is a two minute job, after you become familiar with the adjustment procedure. All adjustments are conveniently located and easy to operate.

The machine comes with a complete tool kit, that includes all the open end wrenches, spanner and hex wrenches necessary to complete all basic service and calibration procedures. The operator's manual outlines the proper calibration method.

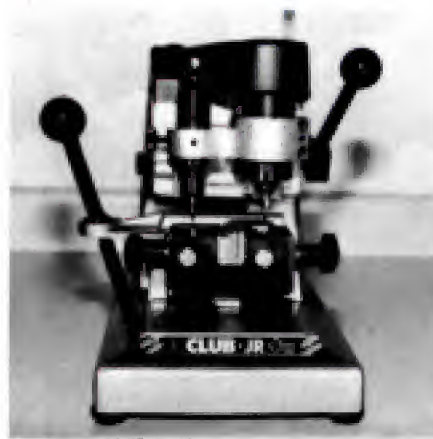
A feature of the new Club Jr. is the reversible over-jaws of the key vises. By loosening the key vise handles, as you see in photograph three, it is



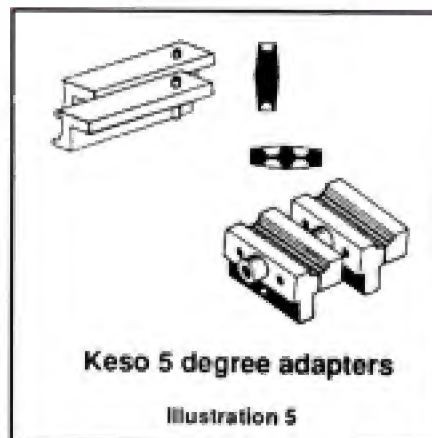
possible to rotate the over-jaws. By reversing the jaws, as you see in photograph four, it is possible to cut Mercedes 2-track keys without adaptors. The Z-profile Mercedes key (Silca HU41P, HU41AP, HU44AP, HU55P, or HU61P) requires no special adaptors on current production Club machines nor on the Club Jr.

The adaptors shown in illustration five are specific to the Keso 5 degree key. To cut this key, it is necessary to hold the irregular shape at a 5 degree angle to the cutter to make the side milled dimples. The edge dimples are made using a separate set of adaptors. Without these special fixtures, making a Keso key can be very difficult.

Illustration six shows the Silca 15 degree adaptors. These are specific to the Kaba Gemini family of locks. The cuts are made at a 15 degree angle to the face of the key. Unlike the irregular shape of the Keso key, the Kaba key is flat on the sides. The edge dimples can be made by clamping the keys vertically in the key vises. Photograph seven shows the placement of the Kaba adaptors in the Silca machine. Note that there is a small screw and washer at the front of the base of the adaptor. This acts as a stop, to accurately position the adaptor in the machine. Also note that the clamping is accomplished by two



4. The reversed overjaws.



Keso 5 degree adaptors

Illustration 5

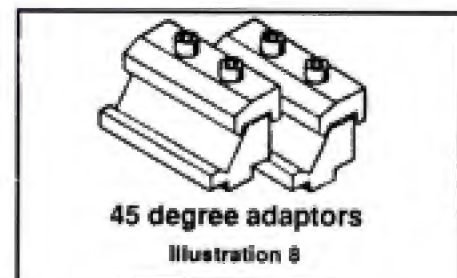


Kaba 15 degree adaptors

Illustration 6



7. Kaba adaptors placed in the machine.



45 degree adaptors

Illustration 8

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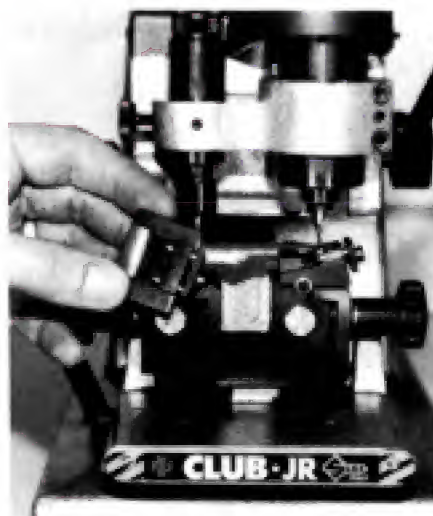
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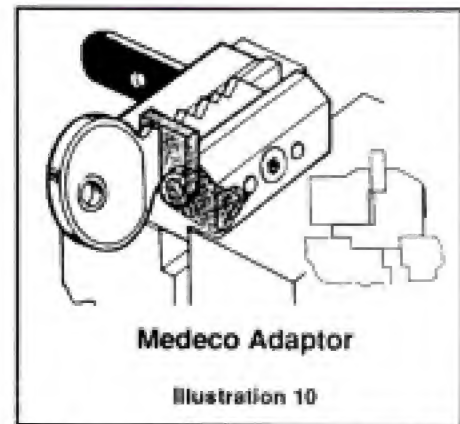
hardened dowel pins, that are compressed by a cap screw from the right of the adaptor. These special clamping pins act to push the key down into the fixture, much better than a solid jaw. This is a very good design.

Illustration eight shows the Silca 45 degree adaptors. They are designed specifically for the Kaba KA 2 blank, using the 45 degree. This high security format is one that I have not seen, but I'm sure that without the adaptors, duplicating the angle of the cuts would be quite difficult. Photograph nine shows the proper placement of the adaptors in the key vises. Note the screw stops at the front of the adaptors. They automatically position the adaptors correctly in the key vises.

Illustration 10 shows the Medeco key holding fixture. This fixture holds a Medeco key vertically for



9. Proper placement of adaptors in the key vises. Stop screws at the front of the adaptors automatically position adaptors correctly in key vises.

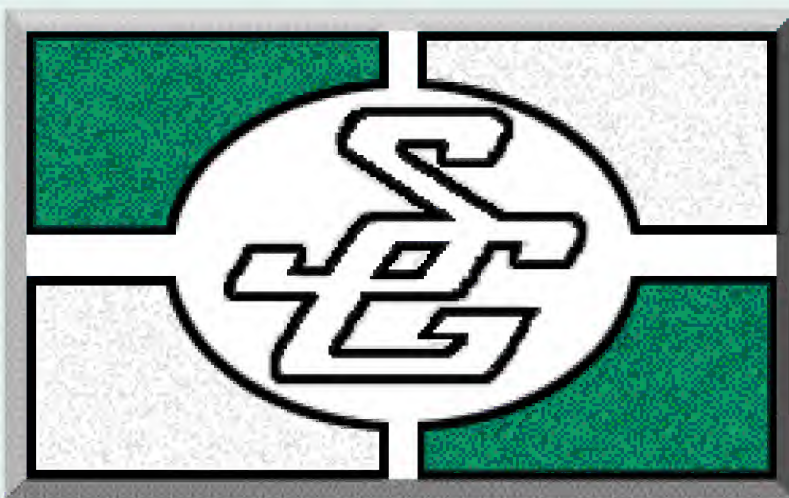


Medeco Adaptor

Illustration 10

"duplication." A flip up shoulder stop at the front of the fixture acts to position the key properly in the vise jaws. The key is clamped in position, as you see in photograph 11, by the hex cap screw at the right of the fixture. Two hardened dowel pins, shown on either side of the cap screw, move with the fixtures moving jaw to insure that the clamping jaw does not shift as it clamps the key.

The keys I clamped in the fixture could not be tipped or shifted after



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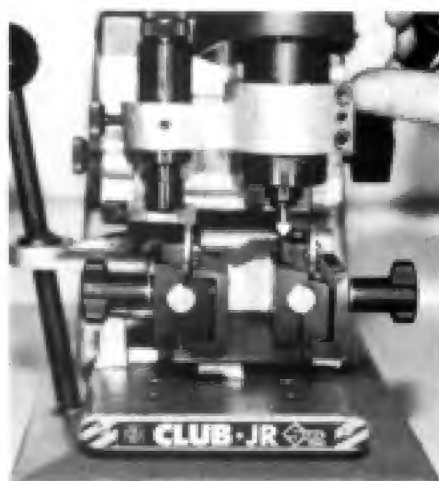


11. The key is shown here clamped into position. Note the two dowel pins on either side of the cap screw which move with the moving jaw to be sure that the clamp doesn't shift.

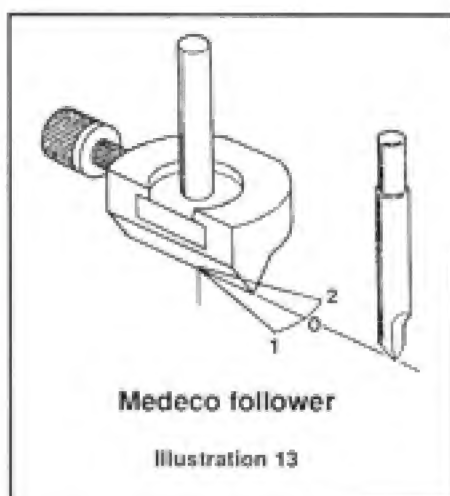
clamping. I'm impressed. Medeco keys are more difficult to clamp. Much like Best keys, that feature is a portion of their duplication resistant design.

The second half of the Medeco cutting adaptor is almost as unique as the key holding fixture. The tracer point, as you can see in photograph 12, is specially designed to fit into the "angled" cuts. The thumb screw on the left side of the tracer point, shown also in illustration 13, allows the base to be rotated. It is this feature that allows the follower to accurately "trace" the left, right and center angled cuts, unique to





12. The specially designed tracer point is made to fit into angled cuts. The thumb screw is also shown here.



Medeco systems. The pointed milling cutter approaches the key blank from the side. As always, it is imperative that the key be brushed to remove any burrs, if it is easier to enter and operate the cylinder smoothly. Careful set-up is a must with this adaptor set.

With the proper cutters and adaptors, I can't think of many keys that fall in the "high security special" category, that this machine will not duplicate.

For more information contact: Your distributor or Silca Keys USA, Inc., 9049 Dutton Rd., Twinsburg, OH 44087, (216) 487-5454, §



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## HPC's One™ Machine

"Weighing in at 51 pounds fully dressed, this is one hefty key duplicating machine. This machine is not going to slide around on the bench or in the van."



Send your lock and key questions to Jack Roberts, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Jack Roberts

I have expressed an opinion many times in the past that one of the problems facing nearly all locksmiths, particularly those new to our profession, is the confusion that exists in the purchase of new tools and/or equipment. Most of the things that we purchase are akin to "buying a pig in a poke" since we rarely see and use the products before we lay out our hard earned bucks, relying solely on advertising for our decisions.

Given the fact that there are national conventions and regional trade shows which one may attend to view and evaluate new products, there are many of us who simply cannot afford the time and expense involved in attendance and must gather our purchasing information from advertising, trade journal reports, or group discussions at local chapter or association meetings. Rapping with other locksmiths at a meeting is great, but we rarely ever get to see and put "hands on" a products except for small hand tools or opening devices.

Key machines represent one of the largest dollar investments that we face and yet many of us never get to see or touch a new machine until we have paid our money and received the delivery. Heck, you can buy a fairly decent used car for the price of some key machines, but you do have the opportunity to kick the tires and drive it around the block. This scenario usually doesn't happen when we purchase locksmith tools and supplies.

The purpose of a technical writer and product evaluator is to truthfully and accurately report on the construction, performance, value and quality of the product in hand. I have



1. The HPC One Machine.



2. Rubber feet that support the One.



3. The 1/5 hp motor that powers the One.



4. The single Polyflex-opti "V" belt and the softie tylon deburring brush.

been charged with this responsibility for quite a few years now, and to the very best of my ability have reported to you on many products with the main goal of assisting you with information before you buy.

When I first learned that HPC, Inc. was going to introduce and market the One key duplicating machine, and that the reporting assignment was to be mine, I was anxious to receive the machine and give it a complete test drive. After all, HPC has been building quality products for our industry for nearly thirty-five years now and I wanted to see if this offering stayed true to the standards they set many years ago.

Finally, the machine was delivered to my door. What we received in this case was the first One of the first production run of this machine. (See photograph 1.) Weighing in fully dressed at 51 pounds, this is one hefty key duplicating machine. Sitting on four adjustable one inch Santoprene rubber feet, (see photograph 2), each having a bearing surface of 5/8", it isn't going to slide around on the bench in either the shop or in a vehicle.

With a base size of 11" x 13", the One requires about 20" of horizontal space on the bench to accommodate the length of the lever handle and the width of the belt and brush cover. Powered by the same proven reliable 1/5 hp motor found on the HPC 1200CM code machine, (see photograph 3), the One motor turns at 3260 rpm and delivers 1750 rpm to the cutter shaft via a single Polyflex-opti "V" belt. (See photograph 4.) HPC's "Softie" Tylon X deburring brush, seen in photograph four, is standard equipment on the One.

Key cutting is quick and easy with the 3" HPC CW-80 cutter (see photograph 5) which is standard although the carbide HPC CW-80 CA may be specified when ordering or may be added at a later date. Cutter removal

Continued on page 34





17. Adjustment screws with knobs.

and if it is needed. The One makes these operations quick and easy without the repeated hassle of cut and try.

Adjustment screws with knurled knobs are threaded into their respective counterparts to provide micrometer settings. (See photograph 17.) Note that there are three threaded set screw holes in the top of the stylus mount. The extreme left set screw, nearest the space adjustment knob, is the bearing retainer screw and should rarely, if ever, need attention. The center and right hand set screws are loosened slightly and space adjustments are made by turning the knob as required.

The set screws ride on a "flat" on the mounting arm and a small amount of

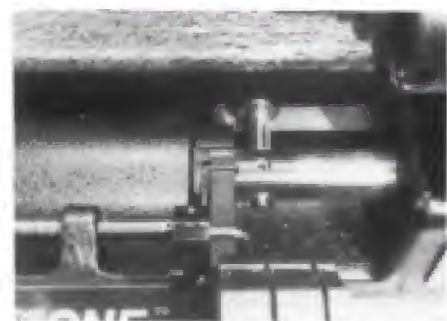


18. Carriage handle and thumb button.

resistance should be felt when turning the knob. When the proper space adjustment is made both set screws may be securely tightened and the space is set.

Depth adjustment is made in a similar manner. On the right side of the stylus holder there are two set screws. The one nearest the knurled knob is the bearing retainer set screw and, as noted previously, should not need attention. The other is the retaining set screw for the stylus when at the proper depth setting.

Here, also, the set screw is loosened only enough to feel a slight pressure of the screw on the flat of the stylus when the adjustment knob is turned. The final settings are made by the methods at your disposal, sight, sound, electronic,



19. Thumb button releases carriage stop.

etc. and are near micrometer values. I believe that the bearing set screws for both adjustments should be identified in some manner to keep us from being curious about "what happens if I turn this one".

Carriage control arrives at near perfection with the One. The center mount carriage handle and the carriage release thumb button (see photograph 18), are about as good as you are going to get. There is no pulling or tugging to release the spring-loaded carriage; just grip the handle and touch the button with your thumb. The thumb button releases the carriage stop (see photograph 19), which also moves the key gauges out of position if you have forgotten to do so. The operation is

*Continued on page 85*

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Continued from page 32



5. HPC CW-80 cutter, standard.

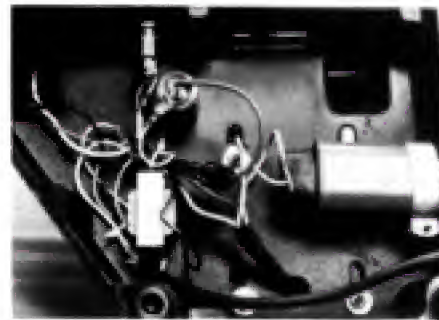


7. The diffused lens work light.



6. The shaft stop hole.

is simplified by inserting a rod into the conveniently located shaft stop hole (see photograph 6) and removing the



8. Wiring network found in base.

cutter nut using the supplied 3/4" open end wrench (CW to remove, CCW to tighten).

The cutter guard, held in place by a thumb nut, pivots back and away from the cutter and does not have to be removed from the machine when changing cutters. The cutter guard mounting shaft can be seen in photograph six. The 3" x 4 1/4" clear plastic chip shield also remains in place when changing cutters. I like time saving features such as this.

An Osram 12v flex shaft diffused lens work light (see photograph 7) is standard equipment on the One and provides adequate, non-glare, lighting for all working areas of the machine. The work light utilizes a standard cigarette lighter socket which is mounted in the base and the light simply plugs in for use. Lighting for most of the photographs in this report was provided by the One work light.

Power distribution is provided by an easy-to-service wiring network in the base of the machine. (See photograph 8.) The motor is seen on the right of photograph eight. On the lower left is the 12v, .7a transformer for the work light. Directly above the transformer is the cigarette lighter type socket for the work light. Above and to the left of the socket is the switch that provides power

Continued on page 36



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Continued from page 34



9. The main power switch.



10. Momentary deburring brush switch.



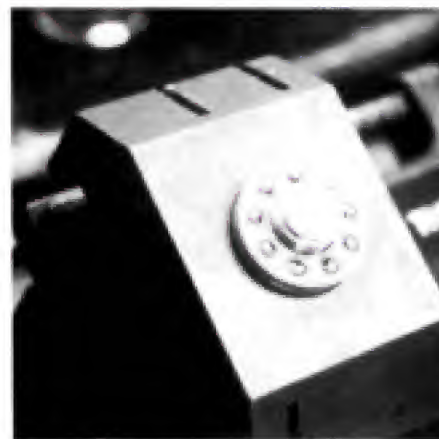
11. There's room for cutting large keys.



12. Two-sided hardened steel key vices.

to the motor when the carriage is released.

Wiring on the extreme left goes to the main power switch (see photograph 9), and to the momentary deburring brush switch (see photograph 10). It should be noted that the main power switch must be "on" to provide power to the momentary brush switch. Maybe everyone wouldn't agree, but I would like to see a change in this wiring to provide constant power to the momentary switch. Using the brush means that the cutter is turning, with



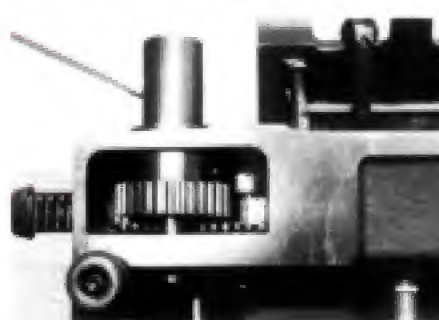
13. Thrust roller bearings and NC threads.



14. Knob controlled key shoulder gauges.



15. Stabilizing arm and roller bearing.



16. Rack and pinion gear for control.

the main power "on." The carriage of the One has been well designed and heavily built to provide accurate key cutting for many years. With 3-5/8" between the vise jaws there is adequate room for placement of the largest and longest keys in today's market (see photograph 11), without fumbling and fussing. I don't see how key blanks can possibly get much larger than they are now, but the One has room to handle some growth.

The two-sided steel key vices (see photograph 12), measuring 1-1/8" x 2",

are designed to accept practically all key blanks that are currently in production. The top jaw, as seen in the photo, is 9/64" deep and is used for over 90 percent of cutting operations. Small blanks such as the Master M-2 (1092B) and old Ford will require spacer wires. Slots in the vise jaws permit placement of "tip-stops" which are designed to accurately position keys such as Ford, Mazda, and Best for accurate duplication.

The vise jaw handles are the time tested HPC type, measuring 3/8" x 1-1/4" for easy gripping. Thrust roller bearings and NC threads (see photograph 13), make duplication set-ups quick and easy. The "V" grip design of the lower vise jaw (seen in photograph 12), and the useable depth, 3/8", will securely hold those troublesome blanks such as the CG-1 (1041G), IN29 (1054UN), AP4 (154AM), X201 (MZ19), etc.

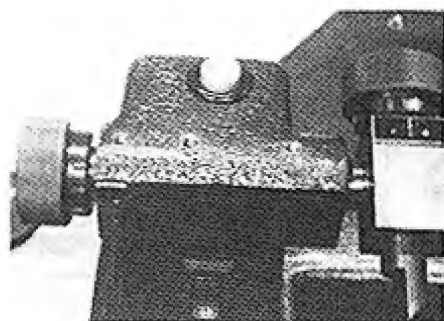
The key shoulder gauge is (see photograph 14) controlled by a knob which is, in my opinion, too large for the intended purpose. It also blocks the view of and access to the main switch. This may soon be changed.

The gauge rod is spring-loaded and has a lateral movement of 3/4" with the gauges evenly matched with the spacing of the stylus (guide) and cutter and the left edge of the key vices. Adjustment can be made if ever necessary. I would like to see more lateral movement of the gauges so that they may be utilized as tip gauges as well as shoulder gauges.

The carriage rack is stabilized by means of a stabilizing arm and roller bearing which rides in a cut-out in the base. (See photograph 15.) This is solid stabilization and the design appears to be one which will provide accurate duplication for many years. Carriage travel laterally is controlled by the rack and pinion gear (see photograph 16), that operates as smoothly as any I have seen. A 90 degree movement of the handle in a 6-1/2" radius provides carriage travel of 1-1/2" which is adequate for even the longest key blade.

Space and depth adjustment of the tracing stylus, often called the guide, presents a real problem with some key duplicating machines and may require several attempts and wasted key blanks in order to get an accurate setting. Many machines, of course, have no provision for space adjustment at all. Depth of cut is the only adjustment available. While space adjustment is rarely necessary, the capability of such a function is certainly an asset when



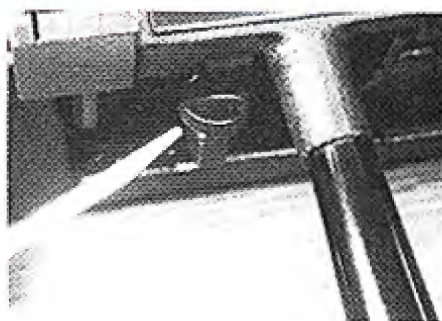


17. Adjustment screws with knobs.

and if it is needed. The One makes these operations quick and easy without the repeated hassle of cut and try.

Adjustment screws with knurled knobs are threaded into their respective counterparts to provide micrometer settings. (See photograph 17.) Note that there are three threaded set screw holes in the top of the stylus mount. The extreme left set screw, nearest the space adjustment knob, is the bearing retainer screw and should rarely, if ever, need attention. The center and right hand set screws are loosened slightly and space adjustments are made by turning the knob as required.

The set screws ride on a "flat" on the mounting arm and a small amount of

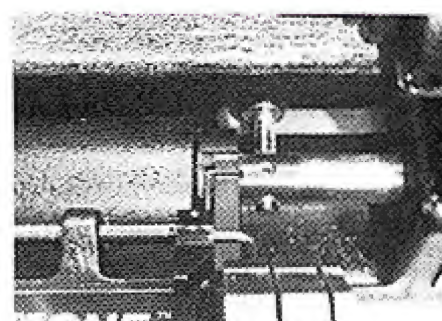


18. Carriage handle and thumb button.

resistance should be felt when turning the knob. When the proper space adjustment is made both set screws may be securely tightened and the space is set.

Depth adjustment is made in a similar manner. On the right side of the stylus holder there are two set screws. The one nearest the knurled knob is the bearing retainer set screw and, as noted previously, should not need attention. The other is the retaining set screw for the stylus when at the proper depth setting.

Here, also, the set screw is loosened only enough to feel a slight pressure of the screw on the flat of the stylus when the adjustment knob is turned. The final settings are made by the methods at your disposal, sight, sound, electronic,



19. Thumb button releases carriage stop.

etc. and are near micrometer values. I believe that the bearing set screws for both adjustments should be identified in some manner to keep us from being curious about "what happens if I turn this one".

Carriage control arrives at near perfection with the One. The center mount carriage handle and the carriage release thumb button (see photograph 18), are about as good as you are going to get. There is no pulling or tugging to release the spring-loaded carriage; just grip the handle and touch the button with your thumb. The thumb button releases the carriage stop (see photograph 19), which also moves the key gauges out of position if you have forgotten to do so. The operation is

*Continued on page 85*



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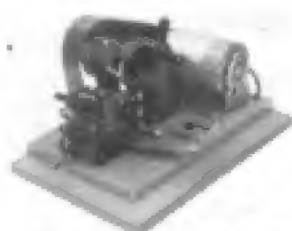
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professional.**



### Framon's #2 Code Machine

The Framon #2 will cut standard cylinder keys, flat keys (locker and deposit box), foreign and domestic auto keys, Medeco and Emhart keys. The Framon depth and space book contains information to cut 1159 series.

Components included with the machine are a depth and space book, three cutters, four spacing blocks, 6" precision dial calipers, spacing clip (Ford & Best) and allen wrench. The Framon #2 code machine does not require cards, discs, cams, carriages, or depth and space keys.



Circle 290 on Rapid Reply

### HPC's Codemax™

HPC, Inc.'s Codemax (1200MAX), electronic code cutting key machine, has recently gone through an intensive re-design process. With the new improvements, Codemax's reliability and versatility are tremendously increased.

Codemax comes equipped with a single, changeable, internal cartridge containing over 275 different depth and spacing charts, which allow it to cut the majority of keys worldwide.

Once the correct depths have been entered, Codemax can create an original key in as little as 20 seconds.



Circle 291 on Rapid Reply

### The ITL 9000 Code Machine

The ITL 9000 computer code machine now has over 600 sets of manufacturer spaces and depths built in with room to enter 160 user sets of spaces and depths. This additional space will allow the locksmith to update his machine in his own shop instantly when any new car or lock comes out.

The speed of the machine has been increased and now the time to cut an average key to code has been reduced to 24 seconds.



Circle 292 on Rapid Reply

### J & B Key-Rite's Code-Master

Code-Master by Key-Rite is an accurate code machine made by converting the Belsaw 200 with our precision code shaft.

Modifications are made to the machine by mounting the motor, shortening the belt and increasing the size of the pulley. Coding is done with the aid of two precision brass plates .310 or .375 that are used in place of the key blank in the v-guide vise. Comes with complete instructions.

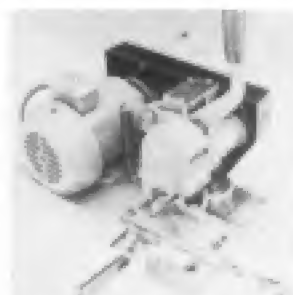


Circle 293 on Rapid Reply

### Medeco Locks' Biaxial Machine

Medeco Security Locks offers their Biaxial manual code cutting machine, designed exclusively to cut Medeco Biaxial high security keys.

It features preset positioning for fore and aft cut spacing. A Biaxial key cutting code book is also supplied with each key machine, free of charge.

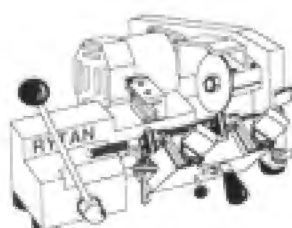


Circle 294 on Rapid Reply

### Rytan Inc.'s RY100

The RY100 semi-automatic key duplicating machine provides uncompromising key duplication, with key vises designed to keep the keys where you put them. The combination of high performance motor, 3-1/8" cutter, and a high speed "stick shift", will power you through your keys and into higher profits.

It is also adaptable for mobile work, with the 110 volt AC or 12 volt DC power plant.



Circle 295 on Rapid Reply

### Scotsman's Versatile Machine

The 747X Key Machine from Scotsman Security Products, Inc. is dependable and versatile in duplicating, decoding and cutting-to-code.

Along with the Segal Modification feature, a mechanism to release the machine's inner control to allow keys to be cut in any radial position and depth, other items included are a solid carbide cutter, heavy-duty ball bearing motor, lexan safety shield, and a 3-prong grounded cord. It is available in 100 volt A.C. or 12 volt D.C.

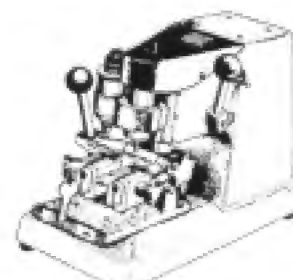


Circle 296 on Rapid Reply

### The Silca Club Jr.

Silca recently introduced the Club Jr. for duplication of Laser/Sidewinder, high security keys like those found on Mercedes and the new Lexus and Infiniti cars. Adapters are also available as options to duplicate by code the Ford and Jaguar Tibbe high security keys with this highly functional, easy-to-use machine.

The Jr. is more economical than the full featured, Silca Club. Silca is offering a cash back bonus until March 31, 1991 directly to locksmiths with proof of purchase of either machine.



Circle 297 on Rapid Reply



### Abloy's #6210 Key Cutter

The new Abloy Disklock machine is designed specifically for locksmith use. The machine has been down-sized to reduce the amount of bench space needed. Keys are now cut by two blades (rather than one), essentially doubling the life of the blades. The blades are also well covered for safety.



### Borkey's Clou From DiMark

The new Clou machine manufactured by Borkey was first introduced at the March Cologne Fair and was on display at the DiMark booth at ALOA.

The Clou is designed for cutting slotted and bit keys and is available with several optional carriages. It comes equipped with a standard carriage for cutting slotted safe keys, and is accurate and easy to use.

The Clou is in the price range of all operations that require dependable, fast, and accurate cutting of slotted and bit keys.



### ESP's Model 5000 Key Machine

ESP's Model 5000 key machine lets you cut keys both automatically or manually with the flip of a switch. Standard features include 34MC high-speed steel cutter, bronze gauge fork and durable nylon brush.

Recent improvements include a new gear motor with a 16.5 second cycle time for fast cutting in the automatic mode. Exacting tolerances ensure dependable accuracy time after time.

New features include ESP's wide-carriage design to cut longer, bigger keys, and black-oxide hardened steel jaws for trouble-free vise action.



### HPC's Pocket Cut-Up™

HPC, Inc.'s Pocket Cut-Up™ TKM-90, is a compact, light and portable key machine that when closed, measures less than 4" in length and only 1-3/4" in diameter.

The key machine is factory preset to cut standard size center sequence tubular keys by code and offset left sequence and right sequence (including dead pin cuts) can be cut with one simple adjustment. Greenwald style tubular keys can also be cut.

The tubular key blank is held firmly in place by the swing-away key holding fixture and also locks the micrometer depth adjustment knob at any pre-selected depth.



### Rytan's Keymaster™

The electricity free Keymaster™ code machine, is a go anywhere, cut anywhere punch machine designed for accuracy. Choose from the array of interchangeable Code Kits to satisfy your specific needs.

KeyMaster™ is made in the U.S.A. to the exacting standards of lock manufacturers.

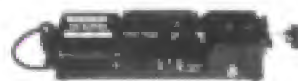


### Scotsman's 747XU Machine

Scotsman Security Products, Inc.'s Scotsman 747XU Key Machine will quickly duplicate, decode and cut-to-code all three size tubular keys.

The key machine makes all necessary cuts for 7, 8, 9, 10 and 11 pin lock, which have center, left or right cuts, as well as dead pin cuts and cuts within cuts.

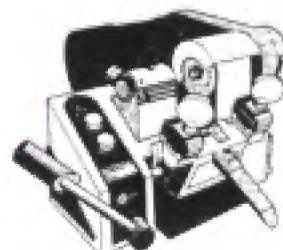
A standard feature on the 747XU is the Segal Modification which releases the machine's inner control, allowing keys to be cut in any radial position at any depth. Other standard features include a solid carbide cutter, heavy-duty ball bearing motor, lexan safety shield and a 3-prong grounded cord. It is available in 110 volt A.C. or 12 volt D.C.



### The Silca Bravo U.S.A.

The Bravo U.S.A. is the current Silca professional duplicating machine featuring a number of improvements.

The Bravo includes machined four way jaws that virtually eliminate the need for adapters even for small keys like those with the Master #7 padlock. It also features a micrometric tracer point for unparalleled accuracy, twin carriage rods to maintain integrity, a removable chip tray, a safety carriage lock and easy tighten wing nuts.



### ESP's Model 3000 Lever Key Machine

ESP's Model 3000 Key Machine operates with a lever that allows keys to be cut in one smooth motion with one hand and is designed for long-lasting dependable accuracy for the lifetime of the machine.

New features include black-oxide hardened steel reversible jaws for trouble-free vise action, and wide-carriage design with increased spacing between the cutter and stylus to cut large-head and longer style keys.

Other standard features are 34MC high-speed steel cutter, bronze gauge fork and durable nylon brush. The Model 3000-12V features a 12-volt motor.





## Round Door Floor Safes

Some safe manufacturers keep records of the drill locations of their random designed doors. Major keeps such records available."



by Carl Cloud

The opening of a locked round door floor safe can be a perplexing challenge for the safe technician. Unlike their square door cousins, the round door locking design may be unique. A door may have only one locking bolt, or may be equipped with a tri-bolt configuration. Instead of being confined within a lock case, the wheel pack may be fully exposed and suspended onto a wheel post.

When the lever drops its fence into the wheel gates, it also may engage a large cam plate. During the turning of the dial to the opening position, the cam is rotated and retracts the locking bolts. The viewing of a locked round door often provides no clues to the position of these important working parts.

Some safe doors have a "fixed" drill point or physical drop. (Physical drop is the pin-point location in the door where the lever lowers or "drops" the fence into the wheel gates). Such is the case with Amsec's lift out round doors. The location and drilling procedures are identical from door to door. Once this exact spot is known by the technician, most safe openings of the brand and model become routine.

Other safe manufacturers are not so obliging and do not have a consistent drop location. Major Safe Co. and Gary Safe Co. for example, produce round door safes with random drops. In other words, the configuration of the locking device may be placed or rotated anywhere within the 360 degrees of the door.

Hypothetically, if there were only a drill point for each number on the dial, you would be granted a possible 100 guesses for the location of a drill point. This would also mean that after the first 100 safe doors were produced, the drill location would repeat. Regardless, the odds of matching a door to its twin would be roughly 10,000 to one.

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Continued from page 44

Opening one of these doors by drilling at the same location as your last opening, is an extreme long shot!

The opening of a round door floor safe lock is basically the same procedure as opening any other combination lock. That is, drill a hole to view the fence and the edge of the wheel pack. Align the wheel gates under the fence and watch the fence drop in. The physical location of the fence is not known in doors with random drops. No matter where you decide to drill the hole to see the edge of the wheel pack, the odds of

accidentally finding the fence also, are almost nil.

A technique of "transferring" is required to move the wheel gates to the area of the fence. If the dial has not been removed, align the first wheel gate to your view in the drilled hole. Read the combination of the gate by noting the dial number aligned with the center of the hole. Determine all wheel gate numbers and transfer this combination to the physical drop and open the safe.

If the dial was removed, you must use a transferring dial and a reference ring. The physical drop of the fence can be found by sighting the gate of the drive cam. Read the gate combination

on the dial, or reference it with the pointer of the transfer dial. Rotate the drive cam until there is a feel of the lever nose bumping the sides of the drive cam gate.

Hold the dial at the location where the bump is felt while turning the dial to the right. Mark the door or dial ring with an index line at the found combination number of the cam gate. For example, if 85 is the combination number of the drive cam gate, hold the dial where the bump is felt while turning the dial right. Draw an index line opposite the dial reading of 85. Dial the complete combination to this drawn line and the safe should open.

This method of transferring will usually require a scope to view the cam gate. Occasionally, an "L"-shaped wire can be formed to probe and locate the cam gate. If all else fails, run the wheel gate combinations around the dial every 2-1/2 numbers until the drop is found.

When drilling a hole into the door for viewing the fence or wheel pack, the drill must penetrate through the cam that retracts the locking bolts. The cam may be made of steel, or in the Amsec door, it will be cast "Zamac." In either case, drill into the cam with a light pressure. An excessive force could possibly loosen the wheel pack from its post.

Some safe manufacturers keep records of the drill locations of their random designed doors. Major Safe Co. records the drill locations, years of manufacture and the original combinations set by the factory. All the information is filed under the serial number of the safe door. Major has a program that furnishes this information, plus a special drill template, to safe technicians who have registered with their company.

Usually, the problem of opening a round door floor safe with a lost combination can be readily solved by a couple of methods. With a simple telephone call to the manufacturer you can obtain the factory set combination; drill the door at the fence; or drill and transfer to the physical drop. What if the lockout occurs on a weekend and the safe manufacturer is closed? Or, the serial number tag is mutilated or missing. What do you do if the relocker is set off?

To explore these questions, let's look at the safe in photograph one. This is a Gary safe with a lift out round door, encased in concrete within a 55 gallon steel drum. The customer recalled the back cover being loose, but never got



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1. Gary safe with a liftout round door.

around to tightening the screws. The lockout problem is a set off relocker. The combination will run, but as soon as the nose of the lever enters the drive cam gate, the dial stops abruptly. As noted before, Gary doors have random physical drops. The location of the handle, opening index or labels has no correlation to the position of the parts within the door.

To solve this lockout, we must first find a reference. The simplest reference is one of the locking bolts. With one bolt located, the other two of the tri-bolt design can be charted. When this information is known, critical parts of the safe lock can also be found.

To find a lock bolt, drill a small hole through the safe body at the door's edge. The hole should be drilled at a slight angle toward the center of the door. Photograph two shows a one-quarter inch drill bit protruding from the drilled hole. Insert a stiff wire probe or the bit used for drilling the hole. Rotate the door until one of the locking bolts humps against the probe. Mark the door with a line from the center of the drilled hole toward the center of the door. This will be one side of a locking bolt. Pull the probe out and rotate the door about an inch. Insert the probe, locate and mark the other side of the bolt. Repeat this process until all three



2. Drilling into the door to find the lock bolt.

bolt locations are marked and charted as in photograph three.

Knowing the locations of the three locking bolts doesn't fix the exact drill point for the fence or relocker, but it narrows it down to three choices. The fence, on this particular door model, will always be located approximately one-eighth inch to the *right* of the center line of a locking bolt and one inch from the center of the dial. The relocker location is one and seven-eighths inches *left* of the center line of a bolt and one inch inward from the edge of the door.

Using your best intuition, select a



3. The thru bolt locations are marked here.

bolt. In searching for the relocker, a measurement is made to the *left* of the



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center line of a bolt. Measure along the circumference of door's edge. Place a mark at 1-7/8 inches. Draw a line from the mark to the center of the dial. Measure from the edge of the door, down the line, 1 inch. This will be the drill point for the relocker.

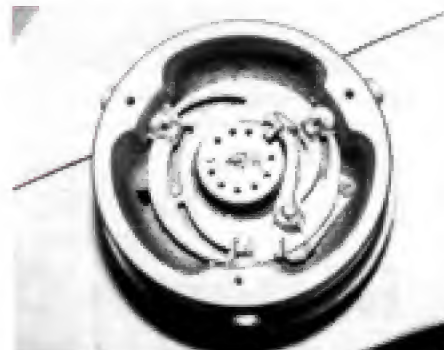
Gary doors are case hardened. This means that the skin of the door is hardened. To begin drilling through the door will require a carbide drill bit or, the skin of the "case" must be ground away to the softer metal. Remember, exiting into the cavity of the door also will require passing through the case skin.

Photograph four shows the drilled door. (The first guess was wrong.) When the relocker is found, insert a stiff wire with a short hook on the end into the drilled hole. Snag the relocker tab and lift to disengage. Turn the dial, retract the locking bolts and smile!

Photograph five shows the inner view of the door. The first drilled hole can be seen on the left side of the door at the edge of the bolt cam. A semi-circle of the second hole can be seen at the edge of the relocker. Note that the fence is just to the left (when viewed from this side) of a locking bolt. The relocker is closest to the right side of



4. The drilled door. Notice extra hole.



5. Inner view of the door.

the bolt.

When a safe technician is registered with Major Safe Co., he is supplied with a drill template. If the technician was unable to contact the factory, or the

serial number tag was missing, the template could still be used to open the safe. The template shows the location of the relocker and the "dog pin." The template has no value unless the factory code for the door is known or, a reference can be found.

To open a Major round door floor safe using their template with a code, the locking bolts must be charted as in the opening of the Gary door. Extend the center line of each locking bolt across the door face. The relocker is directly opposite one of the locking bolts. Place the template with the "relocker" location on one of the extended lines. The template will show the position of the three possible locations for the relocker and the drill points for removing the dog pin.

The opening of a round door safe requires research of the particular door and model. The design of doors will vary between models of the same manufacturer. Your library of safe information must include exact locations of the important parts plus, how to identify one model from another. If you do your homework, the opening of round door safes is just another satisfying task of making good money.§



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# Beginner's Corner

Learning All You Can



by Eugene Gentry

**H**ave you picked up a trade magazine to read names like Best, Abloy or Segal, and find you're not familiar with these types of locks, or in fact, that you have never heard of these names before? Well, don't feel bad because you are not alone. The new locksmith runs into new things every day.

The key to knowledge is learning about new products and techniques, then putting them into practice with the products and techniques that you are familiar with. You know the old saying,

"You are never too old to learn." Every day there are new products on the market, new locks, new cars with anti-theft provisions, new keys and new electronic devices. A locksmith has to keep up with all the new technology if he is to have a successful business.

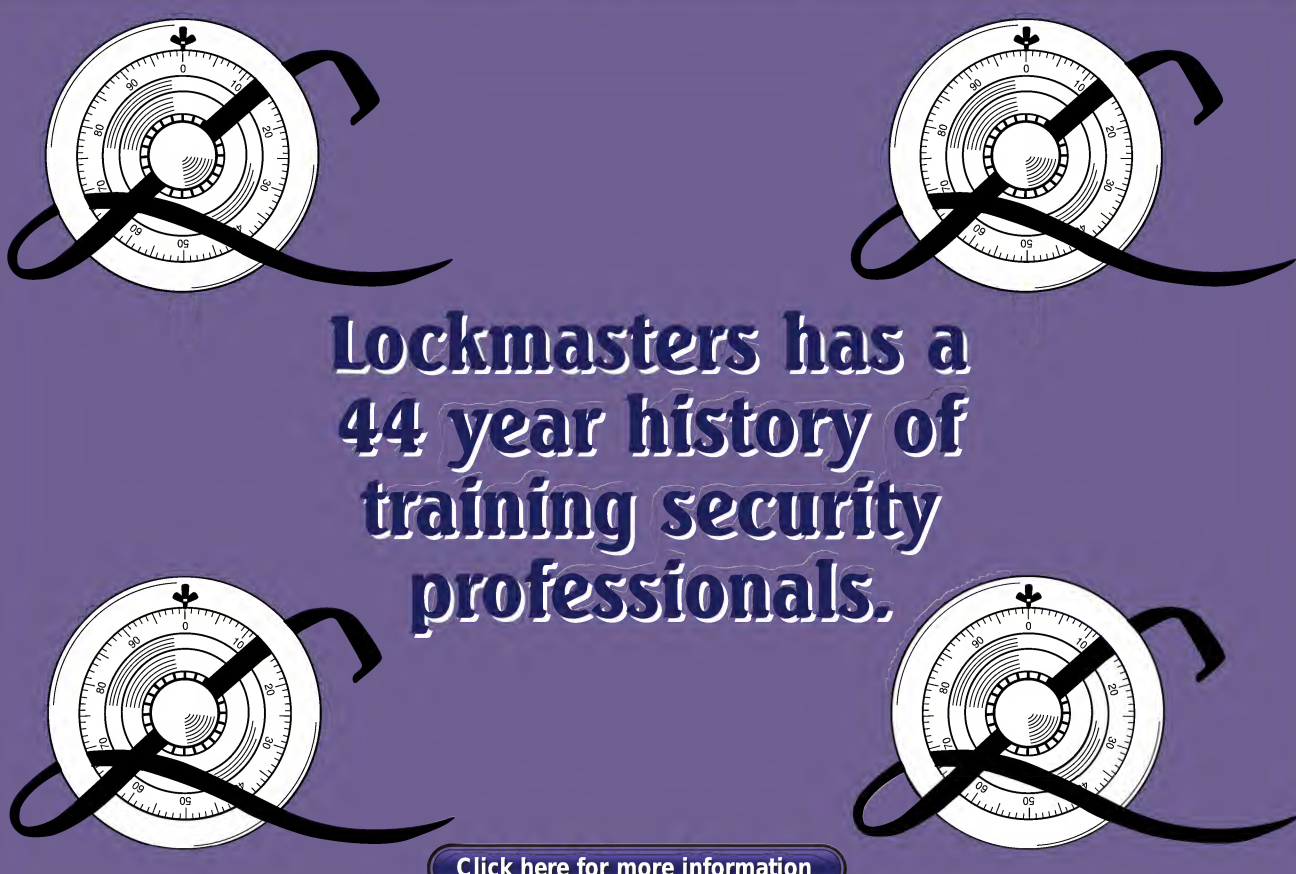
What can a new locksmith do to further his knowledge? Where can he find information? Who will help him? How can he remember all that he has learned? Should he join a local locksmith association? These are questions the new locksmith is asking.

The schools that teach locksmith training are very helpful. Many have 800 numbers that you can call for information. The school I attended offers help whenever needed. I have only called a couple of times, and the resident locksmith there gave me all the

information that I needed and more. Many times I forget that the help is available and waste time trying to figure it out myself.

Read everything you can about the locksmith business. Subscribing to this magazine is a good start. Read every word of it from cover to cover. You will learn something from every article, and what you don't understand now you will keep for future reference. I keep my trade magazines in a pile for the year, and keep the December index on the top for quick reference. Many times I have checked the index for information about a certain type of lock and usually find either an article or tip about the lock. Last week I looked up the Nissan auto ignition lock and found references in three issues.

*Continued on page 51*



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Continued from page 49

You will learn from the letters to the editor what is going on around the nation. You will learn from the manufacturer and distributor advertising about new products and the descriptions of other locks or supplies. You will learn invaluable aids in the question and answer sections. You will be able to participate by sending your ideas, and will be able to ask questions.

**Study the key catalogs.** Get familiar with the names of all the different kinds of keys, and what they look like. See what the difference is in heads and keyways. Try to remember the common keys or the types of keys you are working with most of the time. Study all types of keys and see if you can guess the depths. The more familiar you can get with keys the easier it will be to recognize them when someone brings you a key to duplicate.

**Another source** of education is reading the catalogs of manufacturers and distributors. For instance, from advertisements for pinning kits, you learn that the pins are standard .115 and they come in graduations of .005 and .003 and you learn new names like spool drivers or mushroom pins. From the key machine ads you learn about all

the different kinds of cutters, automatic, semi-automatic, for dimple and wave keys, code cutters, tubular cutters, and flat steel cutters. Here is a helpful tip that comes from an ad for a plug spinner. "Often times it is almost impossible to pick a lock in the right direction but easy to pick it backwards." So you see you are able to get some free education from a catalog.

**Along with your reading,** you should be practicing your impressioning, and lock picking. If you are insecure in these fields, there have been some recent articles in *The National Locksmith* on both subjects. There are some good books out on wafer reading and a very interesting book on safe manipulation by Robert Sieveking. Any publications that you can accumulate will serve as reference material.

**Last Saturday** was a day that I will call an education day. A friend, Rick Malanowski called and told me about an auto junk yard where you could go in and take off the parts needed yourself, then pay when you go out. He wanted to get some foreign car locks to practice on, and to check on some trunk locks, and I wanted some G.M. locks to practice on. I took the trusty camera along in case there was a chance for pictures.

We left the house, but before we had gone two blocks, we stopped at a car port sale. There I picked up a file safe with no key for \$2.00 (*see photograph one*) and Rick got two vending machine coin boxes without keys for \$1.00 a piece for study. Without other delay we headed for our destination.



1. Bargain fire safe found at a sale.

We signed in at the window of Fred's Junk Yard, and they issued us hard hats. Tool box in hand, we went into the huge yard, with cars of all descriptions piled two deep. I can see the reason for the hard hats. I hit my

Continued on page 86

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# Computer Software Mini-Section

## HPC, Inc.

HPCSoft, a division of HPC, Inc., has compiled a family of products to aid the locksmith and the facility manager. There are five different software programs available: Workshop, QuickChart, QuickCore, KeyTrack and QuickKab.

Workshop, the on-line code book, provides all the information found in code books on any IBM-compatible personal computer. You can also choose to search for all instances of a specific code, lock manufacturer, key blank, 1200CM card number or any combination of these items. Workshop comes with a comprehensive manual for flat-steel and silhouette keys.

QuickChart and Quick-Core, HPC's masterkeying packages, can construct masterkey systems of up to 3 levels and 1600 keys. While accomplishing this, it is able to support manufacturer specifications and provide the safety and security of constant checking for incidental masters and cross keys.

Keytrack is HPC's key blank cross reference system. Keytrack allows custom sorting and quick indexing of key blanks by manufacturer or description. KeyTrack's special "find" feature has the ability to find a specific blank or description.

QuickKab, the electronic key cabinet system, will allow you to record all locks in a facility, relate them to a specific hardware schedule, record the number of keys associated with each lock and track all employees who have checked out each key. The system supports up to a 5-level master key system and will track appropriate masters for each lock. You can track lost keys and produce several reports for audit purposes. All lock manufacturer depth and space data is contained in its system or you can bypass that information to key in bittings which fall outside those supported. Key systems may be quickly converted from QuickChart or QuickCore and sent directly to Codemax. Your information is secured by a 2-level password system.

All five of these software programs are fully compatible with Codemax the electronic code cutting key machine.

## STM Products

Security Software, a division of STM Products, has introduced two important locksmith programs. The Super Key™ program is master keying management software that allows unlimited quantities of systems for any lock manufacturer, including most interchangeable cores.

We allow you to select up to four levels of master keys, plus row, column and block masters, giving you seven levels in all. You can design any size system, from a single master with a couple of keys to an apartment complex with multiple buildings and floor masters, and hundreds of change keys. In fact, you can create master key systems with up to 4.7 million keys, and you can use them all, unlike some other programs.

You are able to enter as much or as little information about each change or master bitting as you need. A wide range of printouts are selectable. Points to remember are: No quantity limits of master or change keys. On line help manual. Handles all popular lock manufacturers, including Medeco and Bi-Axial systems.

Also, the Code Manager is a lock code system developed for the locksmith. The colorful screens feature easy to use menus. Information filled windows let you view codes on screen, print depth and space information, and cut keys on your computerized key machine. Code Manager loads in seconds. Codes can be found accurately in an average of one second or less on an AT. Along with the program comes a free six month update program. An on-line help manual makes use very easy.

Either of the programs in this article require an IBM PC, XT, AT or compatible with 512K of memory, VGA, EGA, or CGA graphic card, mono or color display, and an 80 column printer is optional.

## Treskat

Treskat develops and sells quality software for locksmiths including CodeMaster, Perfect Master III and a brand new release called Advantage.

CodeMaster is the electronic code book for locksmiths and free demo disks are available. With the program you will have instant access to more than 1400 different code series along with space and depth charts, key blanks, manufacturer, application and other valuable information. Of course the actual code bittings for each series are not free and are sold in "data files" which can be bought one at a time or in sets. New data files are released every 9 to 12 months and cost subscribers a nominal fee.

The complete set of CodeMaster contains more than 1.5 million codes and takes less than 1 megabyte of disk storage space. The second of Treskat's trio of locksmith programs is Perfect Master III which lets you create master key systems for almost any kind of 5, 6 or 7 pin lock by answering just a few simple questions. Simple yet powerful. In use by thousands of locksmiths worldwide and by major lock manufacturers in the U.S., Perfect Master is available for IBM and compatible.

The latest Treskat release is Advantage. It is a complete inventory and invoicing program that stores information on your customers including their name, address, phone, the kinds of products they buy, how much they owe, last transaction date and so on. The inventory section keeps track of all your products and prints dozens of reports to the screen or printer. For instance, see exactly how much you made for any day, month or year along with the total net sales, exempt sales and sales tax. Password controlled if you want. Prints multiple or zero copies of invoice for laptop use. It is IBM and compatible and not copy protected. Expansion modules for receivables and payables are also available.



# The Lighter Side

You Gotta Have a Gimmick



by Sara Probasco

"Don," I called, kicking open the back door as I struggled in with sacks of groceries. "Can you come help me?"

"Just a minute. Let me watch this one more time," he replied. "I gotta figure out how he does it."

Craning my neck, I peered around the parcels and into the den. Don was sitting on the edge of his chair, the remote control switch in his hand, re-playing the lock-picking sequence of a Magnum, P.I. re-run he had taped.

"What in the world are you doing?" I asked.

"What does it look like? I'm watching Magnum pick this lock." He shook his head sadly. "He makes it look so easy." Finally zapping the picture off and coming to my aid, he added, "How can I hope to compete with the TV heroes? I've got to come up with some other way to impress my customers."

"Well, you know what Mae West said."

"You want me to go around asking everybody, 'Why don't you come up and see me, sometime?' I don't think I could get by with that in a town the size of Uvalde, Texas."

"Goodness, no."

"Goodness has nothing to do with it, Dearie," he said, aping Mae West's sultry voice.

"I was referring to her comment about having a gimmick," I said.

"Gypsy." He opened a bottle of stuffed olives and popped a couple into his mouth.

"What?"

"Gypsy Rose Lee. She's the one who said, 'You gotta have a gimmick,' not Mae West."

"Nevertheless, maybe that's why you need a gimmick."

I had put all the groceries away and

was assembling a lasagna casserole for dinner when Batman leaped into the kitchen with outstretched arms.

"Ta-dah!" rang the familiar voice. "What do you think?" Standing in a crouched position, Don adjusted the black cardboard head-covering which had slipped down over his nose.

"Well, at least stand up straight, so I can look at you," I said, reaching to wipe dripping lasagna sauce from the overhead light fixture.

"I can't. My shoe is tangled up in the cape. Anyway, what do you think?"

"I think I may have to make some more sauce."

"No, I mean about my new gimmick, my costume."

I couldn't believe he was serious. "Oh, Don, I don't know," I stammered.

"Everybody loved it at the locksmith convention costume party, last year."

"I know, Honey, but that was different."

"I don't see why."

"Well, for one thing, you wore black trousers and a Batman T-shirt under the cape, instead of that blue work uniform." I could see my argument fell on deaf ears, so I decided on a more direct approach. "Have I missed something, Honey? I don't see much connection between Batman and the locksmith business."

"That's because I haven't told you," he said smugly. "Instead of Batman, I'll be VATSman. You know, VATS, like the key system in some of the new automobiles? Maybe I could order a shirt with something appropriate printed across the chest. What do you think?"

"Tell you what. Let's mull it over for a day or two before we commit. Besides, I thought most people were calling that the 'Passkey' system now."

By the next evening, he was riding a new horse.

"I've got it!" He came sloshing from the bathtub with soap bubbles trailing behind his towel-wrapped figure.

"Should I call a doctor or the police?" I asked, glancing up from my reading.

"Be serious," he said.

"I'm trying to be, but you certainly make it difficult." I swallowed a giggle and assumed a solemn face as I patiently closed my book. "Tell me. What is it you've got?"

"Picture this," he said, painting the scene with his hands in the air above our heads. "A sign above our shop door reads, 'The Lock Hospital'. We'll paint the van to look like an ambulance, and we'll all wear lab coats to work in. I'll get some signs painted saying, 'The Doctor is In,' and 'The Doctor is Out,' and we'll change them, depending upon whether it's Ted's day to work or not."

"I don't understand. What does Ted's work schedule have to do with it?"

"Don't you see? Ted can be our gimmick. We'll advertise him as The Lock Doctor. He has a PhD, so it won't be pure fabrication."

"But, Don, Ted's PhD isn't lock related. It's in entomology. Bugs."

"I know, but I didn't think that little detail would matter to anybody. Do you?"

"Well, I don't know. It might."

"Yeah. I see what you mean. We wouldn't want to misrepresent the situation to the public. Well," he squished across the carpet toward the bathroom, "back to the drawing board."

Monday rolled around, and Don hadn't mentioned any fresh ideas.

"How's your gimmick coming along?" I asked.

"Not too well. I can't seem to come up with anything very cute or clever," he admitted.

"Maybe that's the problem," I offered. "Maybe you're trying too hard to be clever. How about a gimmick of service, integrity, customer security and satisfaction...the things we've worked to make our business stand for in the community."

The idea felt good. After a period of "trying it on for size" we projected the idea into advertising, business cards, and stationary, with excellent results.

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## Mosler's Tri-Bolt

"In fact, on my business card, I have the phrase, 'I ain't afraid of no Mosler.' But obtaining parts for Moslers can be a problem."



by Dale Libby

**D**oes the name Mosler bring apprehension, fear and shaking to the expert safe technician? Sometimes it does, and other times it should. In fact, on my business card, I have the phrase "I ain't afraid of no Mosler." The general public can identify somewhat with the name of Mosler, having seen it in banks, but the real purpose is for my fellow locksmiths and safemen. It is both a reassurance and an ice

breaker. Most times it works well.

When I hear the name Mosler, I always foresee problems with parts and obtaining them. This is true on older Mosler safes when the parts in question have not been manufactured for many years. With the advent of standardization, and retro-fitting, the modern Mosler 302-402 combination lock can be replaced by another manufacturer's Group II combination lock. Some of the problems still faced with converting a Mosler lock to another brand are the following:

1.) Spindle size must be enlarged through the mounting plate, face of the door, and the hardplate to accept 5/16" standard spindle.

2.) Often, the end of the bolt must be

altered to accept an add on locking block on larger money chests.

3.) Certain safes and chests use extremely long extended bolts which directly lock behind a door edge, jamb, or protrusion.

4.) Many relock triggers are dependent on special case mounting fixtures or postures, which would have to be transferred to the new lock case. Sometimes these special functions cannot be made except with an original Mosler configuration and parts. If a new lock is installed, then some of the relockers would not function and would have to be removed. This is not recommended!

Then, there are times when, if you  
*Continued on page 60*

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cannot get the lock from Mosler and if there are no replacements around, it will be impossible to repair the unit. One of my favorite and most difficult safes to dial open is a Mosler tri-bolt unit, as shown in photograph one.

This type of configuration signifies a rather common occurring older safe. The stepped pie plate type dial ring centers a dial with the word Mosler embossed in the middle denotes K series Mosler "flapper" lock with an interesting cam and lever arrangement. Dave Mc Omie can probably give you the exact part number and series designator.

This safe style can be seen in both tri-bolt money chests and on round door in-floor safes. If you can manipulate, it is much better than trying to drill and repair this safe. No new parts are available, and I think it would be impossible to fit any other lock into this special arrangement so that the tri-bolt mechanism would work.

Photograph two shows the back of the K series lock. If you look closely, you can see a hole in the end of the combination lock bolt. A pin fits through this hole which attaches to the underside of the lock bolt and cam.



1. Dial found on the Mosler tri-bolt safe.



2. The rear of the K series lock with relock under right case screw. This is the infamous "Flapper" lock.

When the combination lock bolt is retracted, the tri-bolt mechanism withdraws all three bolts.

This lock is in a special size class by itself. Nothing else except another replacement will fit. Added to that,



3. Relock trigger has not been activated.



3. Relock trigger activated and blocked from moving by spring activated blocking plate. Precise drilling is needed.

some of the case modifications are integral to this lock specifically.

Looking again, at photograph two, we see that the case cover has been further modified. There is an arm that is spot welded to the back of the case. This is for the relock disarming trigger

Continued on page 87



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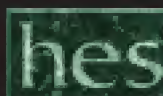
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# Profit With Access Control

"The skills critical to marketing and installing access control equipment are skills which have long been the locksmith's calling card."



by Don O'Shall

**P**reparing to lay out an access control job is a lot like preparing to lay out a masterkeying system. Your first job is to familiarize yourself with the premises itself. Take a brief walk-through paying close attention to such details as door hardware, door type and condition. Just as these affect a masterkeying job, they affect an access control solution.

Next, take a few moments to talk with the person responsible for the access control project, just as you would the person in charge of a masterkeying project. You will even ask similar questions, such as:

1.) Who needs to enter a lot of different areas? 2.) Is there anyone who needs to open a few different areas? 3.) Is there anyone permitted to go every place? 4.) Which doors do a lot of different people need to use? 5.) Are there any doors that require extra security?

In addition to these, however, you will need to ask some very specific variations. You will need to find out at what times large numbers of people need to be locked out. You will need to ask if there are people allowed twenty-four hour a day access. Are there any times when only a select few or a particular individual or group will be allowed in? What about holidays; how do they affect access times?

Masterkeying is a form of access control because it attempts to limit *who* can go *where* and under *what* conditions, but electronic access control allows us to add *when* as well. This allows us far more selectivity in setting up the system.

For example, using electronic access

control equipment, we can allow a custodial employee to go everywhere during his or her shift, yet deny him entry anywhere in the building when he is "off-duty" or during vacation periods.

Another option we can gain with some electronic access control equipment is event tracking. If a theft were to occur in a protected area, for example, we might be able to list the last people to use the door to it, or everyone who entered it during a certain period of time.

Of course, not every piece of access control equipment is equal. Some pieces use the "bulk loading" technique with no individual recognition. This is fine for low security areas where a large number of people need to use it, such as the entrance door to a private club. During normal hours of operation, the device locks out anyone except those having the combination or card or other actuating device. If someone were to gain entry during that time, chances are that someone who failed to recognize him would approach to determine if he did indeed belong.

After hours the device will not allow anyone entry. For such a situation, it may not be necessary to individually verify each entry or to track and record entries. The biggest disadvantage to this is that if a card (or whatever actuator is being used) were to be lost or stolen, it could not be easily deleted from the system without affecting the other cards, etc. in use in the system.

Similarly, some pieces of equipment do not permit history reports or event tracking. They allow or disallow entry on an individual basis, but after that they forget what they did and when. This is fine for such things as a common employee entrance to the building, etc., but would certainly offer little protection for high security areas, or other high risk areas of any type. For these it is necessary to have a system with all the "whistles and bells."

The ability to authorize or delete an

individual's access ability can be vital in many types of applications. But even this offers us options which we must find out whether the user requires for their purposes.

Some pieces of equipment require a visit to the door or even the disassembly of the device at that door in order to add, change or delete access requirements. While in some, perhaps even many, cases this is perfectly acceptable, the loss of time to do so may be critical in other applications.

Some equipment permits this to be done remotely, perhaps even from a different city if necessary, through the use of a personal computer and a modem to send the signals. For even greater security on such applications, special security modems such as the password and call-back modems are available.

In short, your options are almost unlimited, allowing you to fulfill nearly any need your customer may have. I have always taught that masterkeying is the selection of appropriate options to balance security and convenience for the good of the customer. Electronic access control is the logical extension of this and permits us to more fully satisfy their needs.

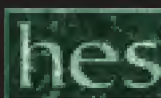
One of the factors that has held access control back until fairly recently was that the initial marketing was done to burglar/fire alarm people on the assumption that since the wiring and electrical skills were similar in many respects, they were the logical people to sell it to the potential customers.

Unfortunately (for them), the skills actually critical in marketing and installation of access control equipment deal much more with door preparation, frame preparation, proper equipment selection, need evaluation, and other similar skills which have been the locksmith's calling cards all along.

Burglar/fire alarm specialists have, to a large extent, tried to sell the

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whistles and bells on the assumption that new is better and more is best. This feature oriented approach seems to work well in alarms, because I have rarely seen a competent alarm company that was not financially secure as well, but it does not seem to work for access control.

**Access control requires** an understanding of traffic flow, areas of responsibility, purpose of a particular application, etc. The system that is absolutely perfect for one customer could be a disaster for another.

In alarms, most of the "decision-making" consists of selecting, applying and installing equipment in a proper manner for the physical environment. In access control, we look at the people involved and evaluate their requirements on a "Need-To-Go" basis, just as we do in masterkeying.

True, there are some electrical or electronic concepts involved, and I would suggest you not tackle an overly large and complex job without appropriate training. But much of the electrical part of the job can be wisely and profitably avoided.

**For example,** the installation of a conduit containing the wire run from one location to the next could be time consuming and labor intensive enough to bankrupt a small shop whose owner chose to "do-it-yourself," tying up himself and his few employees for days or weeks during which no standard locksmithing calls could be taken.

But neither I nor any of my employees do a long wire run such as that. Instead, it is farmed out to a local electrical contractor who specializes in such work. He uses union electricians, does it between other larger jobs and on "bad weather" days, and has always completed it on schedule and under budget, allowing me to concentrate my efforts on door and frame preparation and equipment ordering and application without neglecting my regular customers and contract accounts.

**In one typical job,** conversations with the person in charge of the building involved indicated needs as follows:

- 1) A large volume of people need to access the main entrance door 24 hours a day.
- 2) There are some days, such as holidays, when the building should not permit this group access, however.
- 3) Cleaning crews exist which need access to the building during the

evening hours, on weekends, and on some holidays.

4) **Because the building** is not air-conditioned, there is a continual problem with employees propping exterior and hallway doors open. Several thefts of large office equipment are attributed to this problem, and there has been at least one incident involving personal assault by an intruder. Employees have shown considerable initiative in by-passing standard exit alarms, etc., in the past.

5) The hallway doors involved are doors that would normally be used in the event of a fire for egress.

6) Management desires the use of a relatively inexpensive card reading device on the main entrance door, so that when employees quit or are terminated, their cards can be removed from the system, unlike standard keys, and at a minimal expense.

7) The remaining exterior exit doors require panic exit and prop detection without a means in ingress, so there will be no readers installed there, except for a loading dock door primarily for custodial use.

8) **All devices involved** must be fail-safe, so that if power should be lost the devices will be unlocked. Sufficient back-up power shall be provided to cover typical summer storm blackouts common in the area.

9) Management wishes to be able to quickly add or delete cards from the main office in an adjoining building.

10) One emergency key activated switch is to be installed, using a high security key, to allow for maintenance access in the event of a card reader or panel failure.

Because a primary factor was the reduction of continuing expense in cancelling cards, it was decided to install a magnetic strip card reader. Because vandalism could be a problem, it was decided that the card reader should be of the "swipe" type rather than one where the cards would be inserted to be read. Another alternative here would have been an "insert from the bottom" type, but the swipe reader is virtually impossible to jam.

**The exterior doors** needed not only latching, but positive locking, so magnetic locks are a logical choice. They should be released from the outside by the card reader, but we also need a fast and easy way to exit from the inside. A sensible solution for this would be to use a capacitance activated device such as the "touch-sense bar." However, since some people, rare

though they may be, cannot activate a capacitance detector, a back-up release should be included.

**A small lighted pushbutton** here can serve two purposes...it can provide an alternative exit, while at the same time providing a visible power check as an alternative to the sensor lights built into some devices. These lights can be a prime target for vandalism from the inside, whereas the pushbutton exit light is perceived as being lighted, not for security checking the system but to provide for emergency exit. Because of this it is virtually never attacked by vandals, particularly in an employee type situation such as this example.

Existing doors will need to be either replaced, or, if they are in good condition, patched and painted. On a wood door, this can be done by using a tool like the Keefe System and some good glue, a little wood putty and some paint. On a metal door, welding, puttying and painting will be necessary. Since my crew uses the Keefe equipment on mortise lock installations, etc., using it to repair wooden doors is a logical extension which they don't seem to mind at all. Metal doors, on the other hand, are generally farmed out to local building contractors.

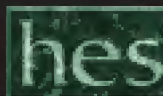
**Because the building** falls under an NFPA code section requiring that on hallway and stairwell doors "automatic release shall be actuated with the initiation of the building fire alarm system" and that "they shall unlock upon loss of power controlling the lock or locking mechanism" a local electrical contractor would initiate such a release and tie it in with the existing fire alarm system.

Deadlatching devices would be required on these doors, so a panic device with a built-in switch to release the magnetic lock would be used which would provide positive latching as required by the code section. I usually also use the same electrical contractor that does the tie-in to provide manpower for the wire runs throughout the building and to supply and install the conduit and wire.

**There are quite a number** of good manufacturers for the magnetic locks, and I feel confident that although there are many reasons to choose a specific one for a particular job, I would not be making a bad selection no matter which we chose. Virtually all of them are low profile devices that will blend well with the opening. One deciding point is the type and location of the door closer on

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the door, since some may provide less clear space for installation of the magnetic lock.

For the emergency key over-ride, we chose a medium duty switch designed to accept a mortise cylinder with a butterfly cam (such as that commonly used by Corbin and Russwin). I would like to see a heavier duty switch if this were a high traffic location, but for an emergency only switch with very limited key issuance, this was more than sufficient.

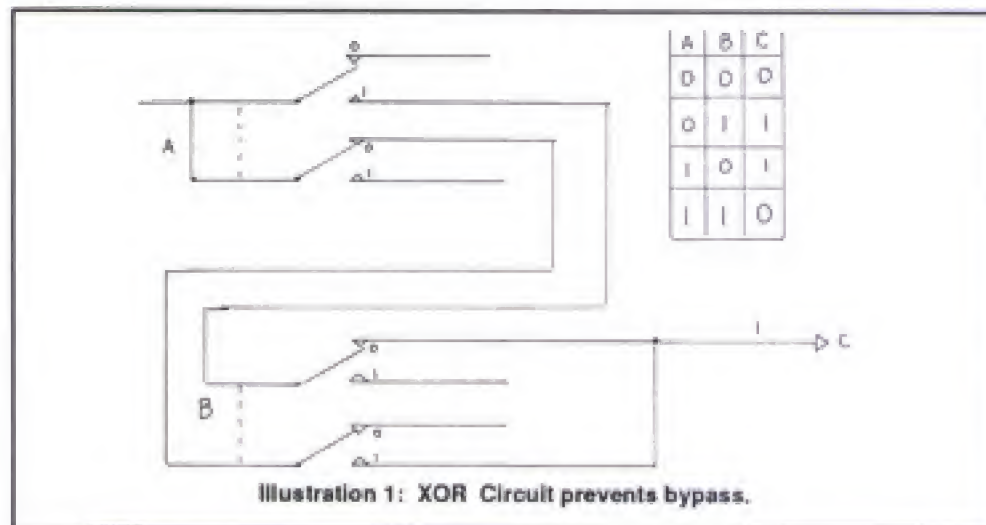
For the card readers and panels, the need for remote controllability in a largely non-computer oriented environment left little choice. I have yet to see a good, user friendly program for communicating with the panels in an access control system.

The customer on this particular job had previewed a demo disk on the Northern Computer PC-PAK program, and was drawn toward several advantages it offers. It is the most user-friendly I have seen, and I was willing to work with it because in previous dealings I had found that their telephone technical support was quite efficient.

Tech support is one of the more noticeable lacks in many of the companies offering Access Control software, so this is an important point to consider.

Throughout the job we used tamper-resistant screw heads, even when the heads would be concealed by the installation itself. Some of these had to be custom ordered, but there are a number of companies, most of them in the New York area, who specialize in such work, so it was not a delaying factor on job completion.

We got a few surprises on this job including an add-on sale for non-stop thresholds (pods from neighboring



trees would collect against the stop on the threshold and prevent positive closing), and an add-on tamper circuit once the employees had found a way to by-pass the magnetic lock.

The employee by-passes, a flat steel plate and a thin strip of steel wire, were both overcome by the addition of a logic-oriented tamper circuit, and no further attempts to beat the system have been successful. In fact, the employees seem to have accepted it now, and much time has gone by without an attempt to by-pass it.

The logic circuit we designed is a simple device that tests to see whether a recessed magnetic switch agrees with the magnet as to the door condition. If both know the door is open, no problem. If both know the door is closed, no problem. But if there is any confusion between them as to what the condition is, an immediate piercing alarm is sounded locally, and a signal sent to the monitoring office.

Illustration one shows the principle behind this circuit. I have used such a circuit in the past, but thanks for the design drawings for this specific circuit go to ALOA instructor Don Coleman. Several manufacturers of magnetic locks offer a similar circuit, and some

will even build it into their units, but it unfortunately is still far from standard "off-the-shelf" material.

Perhaps recognition of the similarities to masterkeying will cure some of the "but-gee-it-is-electronical" awe that has kept many locksmiths from considering jobs in this profitable line of work.

Virtually every type of business is a current potential customer for this type of job, although colleges and universities are among the most universally interested potential users at this time.

Remember that you can do a small job such as the single door system in as little as one day, or by using the "Divide and Delegate" techniques described in this article, you can turn a large job into a small but profitable manageable one.

Remember however that if you are going to sell a PC-based system, you need to be more than passably familiar with the operating system and useful utilities involved in case a computer error should complicate the system. If not, you will need a qualified expert on this topic as well.

There is money to be made, and customers to be sold, but if you try very hard you can ignore both...or not. §

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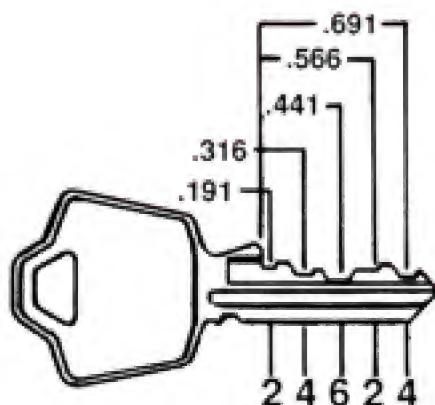
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# ESP Small Pin Codes

H001-1000



## DEPTHS

0-0.282	5-0.192
1-0.264	6-0.174
2-0.246	7-
3-0.228	8-
4-0.210	9-

## KEYWAYS

ESP	ES9
ILCO	1503
CURTIS	CO106
TAYLOR	R22B



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### Keyblanks:

ESP ES9  
ILCO 1503  
Curtis CO106

### Code Machines:

1200 CM No. 26  
Codemax No. 1 - 037  
DSD Page Ref. 1-18

0001	0051	0101	0151	0201
01 21031	51 05163	01 16420	51 36442	01 56642
02 36220	52 10426	02 21455	52 03433	02 61215
03 43411	53 22040	03 36626	53 11341	03 05341
04 02262	54 24202	04 53141	54 22442	04 10442
05 05121	55 31525	05 02464	55 26613	05 11361
06 53503	56 41055	06 13165	56 62402	06 21055
07 61413	57 45143	07 22664	57 05561	07 33163
08 64624	58 13121	08 30442	58 10262	08 36240
09 03455	59 16402	09 43615	59 41211	09 51543
10 22404	60 23051	10 53321	60 43235	10 62420
11 30462	61 25363	11 03651	61 36226	11 02402
12 33141	62 51321	12 22462	62 02424	12 13325
13 51123	63 62646	13 44240	63 11563	13 42464
14 56224	64 05505	14 51563	64 61013	14 03235
15 63051	65 13145	15 64020	65 65521	15 22046
16 02024	66 42420	16 10226	66 02420	16 31141
17 30446	67 45305	17 23111	67 23255	17 42264
18 25505	68 02446	18 26635	68 30424	18 45363
19 36262	69 10202	19 33561	69 36426	19 50266
20 41033	70 23211	20 02620	70 42044	20 64042
21 44204	71 26253	21 11525	71 45105	21 41031
22 03635	72 33521	22 16640	72 51505	22 46635
23 10246	73 43035	23 23233	73 62266	23 05361
24 13521	74 56402	24 31321	74 03631	24 13503
25 21255	75 31103	25 43215	75 13125	25 22426
26 41611	76 16442	26 50466	76 21613	26 26415
27 50202	77 21051	27 61055	77 24020	27 30402
28 56240	78 23633	28 02242	78 36402	28 43433
29 61233	79 02644	29 13301	79 46233	29 46235
30 03053	80 11325	30 21313	80 13565	30 11321
31 11543	81 33101	31 24426	81 21431	31 23015
32 16244	82 41231	32 36202	82 25305	32 33565
33 33505	83 44046	33 45121	83 44620	33 41413
34 41631	84 56202	34 50262	84 50402	34 02624
35 62026	85 61255	35 61213	85 53165	35 31361
36 46653	86 02204	36 64642	86 03255	36 36446
37 31125	87 16262	37 03215	87 16620	37 50244
38 53101	88 30244	38 11303	88 23411	38 63213
39 36620	89 43211	39 21631	89 25523	39 64420
40 45165	90 46613	40 30226	90 30264	40 03655
41 50426	91 51525	41 44262	91 43453	41 16266
42 03611	92 61453	42 51145	92 50462	42 21651
43 21213	93 03415	43 63231	93 61033	43 33545
44 26435	94 11505	44 02640	94 02044	44 42242
45 30202	95 21611	45 25105	95 05305	45 46453
46 41451	96 25301	46 31565	96 25143	46 53521
47 53345	97 31543	47 33541	97 31161	47 61433
48 04224	98 42466	48 44024	98 41013	48 64204
49 24266	99 04402	49 50226	99 44242	49 02426
50 56646	00 10464	50 56246	00 53565	50 13305





## H001-1000 ESP

### Keyblanks:

ESP ES9  
ILCO 1503  
Curtis CO106

### Code Machines:

1200 CM No. 26  
Codemax No. 1 - 037  
DSD Page Ref. 1-18

0251	0301	0351	0401	0451
51 22020	01 31145	51 22662	01 16646	51 02404
52 31303	02 42662	52 41615	02 23415	52 10220
53 41235	03 45125	53 51143	03 30420	53 36624
54 50442	04 51163	54 53121	04 42664	54 45343
55 53563	05 03231	55 51143	05 51105	55 21655
56 61251	06 16426	56 11345	06 53361	56 26211
57 05321	07 21015	57 04026	07 02266	57 41613
58 10404	08 33121	58 21633	08 11541	58 44220
59 23033	09 45503	59 25325	09 23213	59 50446
60 41015	10 53545	60 36244	10 42462	60 13361
61 44642	11 61035	61 41455	11 56264	61 24040
62 02202	12 64220	62 51365	12 31501	62 30242
63 11301	13 04202	63 62202	13 44202	63 43451
64 16246	14 11363	64 03035	14 51345	64 61431
65 22644	15 16624	65 11501	15 61631	65 65503
66 36420	16 50420	66 21233	16 65543	66 65101
67 45161	17 63215	67 36424	17 02646	67 03435
68 51343	18 21053	68 43013	18 13541	68 13501
69 64026	19 31521	69 51125	19 21035	69 42046
70 03633	20 41655	70 61053	20 42426	70 51165
71 13345	21 02440	71 10462	21 56620	71 64262
72 23615	22 26255	72 22024	22 63055	72 16202
73 33501	23 30246	73 33145	23 03431	73 26611
74 43251	24 51561	74 42440	24 10242	74 02626
75 53125	25 56204	75 53161	25 21211	75 23431
76 61015	26 61435	76 64046	26 31365	76 30224
77 02466	27 04042	77 03411	27 44040	77 43233
78 16224	28 13563	78 16240	28 56242	78 61455
79 24240	29 21033	79 36242	29 61253	79 04242
80 42644	30 31105	80 45563	30 02042	80 16464
81 10240	31 41051	81 51501	31 05301	81 21251
82 26213	32 46253	82 02244	32 13101	82 33125
83 31165	33 50464	83 13141	33 36266	83 53505
84 41431	34 62046	84 21635	34 41251	84 05365
85 51361	35 02462	85 41253	35 46413	85 16642
86 64464	36 11521	86 61031	36 51541	86 22044
87 46213	37 23011	87 64662	37 62662	87 30262
88 53365	38 16466	88 21411	38 02442	88 33525
89 16462	39 43255	89 45101	39 11565	89 41415
90 21231	40 46631	90 53325	40 23613	90 56424
91 36642	41 03013	91 62020	41 11343	91 63211
92 41035	42 13525	92 02026	42 23235	92 65341
93 46433	43 21415	93 24024	43 50424	93 04266
94 21451	44 30464	94 36440	44 61651	94 31143
95 03211	45 45341	95 11305	45 13505	95 42640
96 23653	46 51523	96 26631	46 26431	96 50220
97 33105	47 62040	97 30426	47 42040	97 03653
98 02664	48 61613	98 43651	48 46633	98 23631
99 10204	49 05521	99 53103	49 53523	99 41435
00 26215	50 13105	00 64620	50 64426	00 56626





## H001-1000 ESP

### Keyblanks:

ESP ES9  
ILCO 1503  
Curtis CO106

### Code Machines:

1200 CM No. 26  
Codemax No. 1 - 037  
DSD Page Ref. 1-18

0501	0551	0601	0651	0701
01 10264	51 03033	01 22402	51 31541	01 33123
02 24462	52 25125	02 05325	52 26455	02 05541
03 31341	53 24642	03 51161	53 43611	03 22446
04 51565	54 33103	04 65103	54 03253	04 45365
05 02264	55 44664	05 43231	55 31305	05 11561
06 26451	56 53301	06 46215	56 44224	06 24264
07 45163	57 65525	07 62466	57 53341	07 03213
08 51103	58 04226	08 31123	58 62620	08 65121
09 64244	59 36464	09 04462	59 41635	09 43413
10 03453	60 41255	10 22620	60 45521	10 46211
11 11365	61 02046	11 03451	61 05101	11 25341
12 21433	62 16644	12 36246	62 04664	12 36466
13 36404	63 31545	13 46411	63 24046	13 16204
14 43055	64 41233	14 65123	64 13143	14 23055
15 64402	65 64240	15 26413	65 16242	15 05125
16 04662	66 53303	16 03031	66 44640	16 62442
17 11545	67 24402	17 10424	67 62664	17 42620
18 33563	68 31325	18 13321	68 42020	18 63013
19 44226	69 05105	19 25121	69 51521	19 16626
20 50242	70 45301	20 04046	70 25361	20 25521
21 04262	71 64640	21 64266	71 11523	21 24266
22 21653	72 53543	22 53501	72 24424	22 31503
23 31345	73 13341	23 23433	73 45501	23 04620
24 36204	74 25161	24 10420	74 61451	24 45361
25 44246	75 43015	25 30240	75 43213	25 62462
26 51305	76 62640	26 42442	76 22026	26 63011
27 61051	77 23231	27 64044	77 30204	27 43033
28 03011	78 33543	28 61415	78 05503	28 24026
29 13123	79 03615	29 41411	79 24246	29 05141
30 24224	80 62244	30 11323	80 21435	30 26231
31 30404	81 43613	31 25165	81 10440	31 13163
32 43415	82 25541	32 24646	82 23455	32 51325
33 46251	83 02662	33 45325	83 51303	33 64462
34 61211	84 56262	34 63053	84 64626	34 42446
35 16446	85 42240	35 05563	85 56220	35 41633
36 11503	86 51363	36 23031	86 61411	36 16404
37 25563	87 62464	37 33161	87 43653	37 21615
38 31363	88 10402	38 22642	88 10244	38 36644
39 36462	89 04624	39 51545	89 04024	39 03051
40 46615	90 26651	40 61633	90 23013	40 41213
41 50246	91 13543	41 26235	91 33165	41 24220
42 61653	92 50240	42 02246	92 25101	42 53143
43 04220	93 45543	43 41053	93 46455	43 64202
44 23451	94 63031	44 53145	94 05345	44 46651
45 36646	95 41433	45 42642	95 23053	45 04240
46 43051	96 24466	46 56640	96 31561	46 25561
47 56420	97 04404	47 62404	97 50440	47 23215
48 61635	98 23651	48 21215	98 45545	48 10224
49 65501	99 31505	49 04244	99 44626	49 43631
50 31121	00 46255	50 36640	00 22640	50 64646





## H001-1000 ESP

### Keyblanks:

ESP ES9  
ILCO 1503  
Curtis CO106

### Code Machines:

1200 CM No. 26  
Codemax No. 1 - 037  
DSD Page Ref. 1-18

0751	0801	0851	0901	0951
51 24644	01 51121	51 26233	01 61611	51 62242
52 05161	02 42646	52 61655	02 62024	52 56624
53 31163	03 63233	53 62642	03 30466	53 46435
54 42262	04 42042	54 43011	04 03233	54 05165
55 50204	05 22440	55 64644	05 44264	55 31301
56 45103	06 23413	56 43431	06 53163	56 24420
57 45141	07 16264	57 24042	07 42244	57 22042
58 62042	08 26433	58 04626	08 56404	58 44266
59 25501	09 62240	59 25365	09 24640	59 53561
60 13303	10 45541	60 04204	10 05565	60 44646
61 21235	11 63035	61 45561	11 46231	61 22420
62 26633	12 31343	62 64424	12 62440	62 05363
63 51301	13 04246	63 43031	13 53525	63 25345
64 46431	14 05143	64 50264	14 45123	64 61615
65 64664	15 24044	65 24262	15 13561	65 64024
66 05303	16 25565	66 02642	16 16220	66 43253
67 24242	17 62044	67 31323	17 23453	67 45505
68 04426	18 51141	68 13365	18 30266	68 13523
69 16440	19 43633	69 26251	19 31523	69 04466
70 25343	20 10266	70 30220	20 10446	70 25123
71 26411	21 05103	71 45145	21 45345	71 62626
72 45525	22 25141	72 56266	22 64242	72 42024
73 64226	23 36224	73 44662	23 46655	73 63033
74 02240	24 21453	74 41651	24 56226	74 43635
75 24624	25 42626	75 64224	25 42204	75 24464
76 13103	26 56244	76 51323	26 25503	76 23635
77 26655	27 44042	77 42202	27 05145	77 05323
78 21413	28 25321	78 46415	28 22424	78 25163
79 05501	29 05543	79 21253	29 03413	79 64264
80 30440	30 36264	80 13545	30 64466	80 44026
81 62262	31 41215	81 23253	31 61235	81 53323
82 43435	32 56426	82 04424	32 45523	82 24244
83 13363	33 43455	83 53305	33 62204	83 25323
84 25545	34 62624	84 64246	34 42424	84 41653
85 16424	35 46611	85 42266	35 05123	85 62264
86 24662	36 10466	86 51503	36 13343	86 46451
87 04464	37 33503	87 42624	37 23145	87 53343
88 53123	38 04420	88 25543	38 62644	88 23035
89 42246	39 26653	89 03613	39 53541	89 05343
90 61231	40 03015	90 22464	40 62446	90 24404
91 56644	41 26453	91 25303	41 45303	91 23435
92 51341	42 13161	92 44624	42 24204	92 43053
93 42026	43 23655	93 50404	43 04264	93 62426
94 22466	44 05525	94 63015	44 13323	94 22626
95 33143	45 31563	95 53363	45 65105	95 05523
96 03251	46 64404	96 44020	46 24620	96 24626
97 26615	47 53105	97 05545	47 62646	97 45565
98 16226	48 50224	98 33523	48 41453	98 43655
99 64040	49 22624	99 25103	49 25525	99 22646
00 45321	50 04044	00 24664	50 45323	00 23251



# Shop Talk

Helpful Questions and Answers

Written by *all* of the following authors: Dale Libby, Robert Sieveking, Dave McOmie, Shirl Schamp, Don O'Shall, and Jack Roberts.

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your locksmith questions to Shop Talk: *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

*Q.: Where can I obtain information on the Schwab fireproof file cabinet?*

*I have a lockout. The key turns, the lock pops out but the drawers remain*

*locked. The owner told me that at first the drawers would not lock when they closed them and pushed the lock in. They noticed a small lever on the side of the top drawer and flipped to see if that would lock the drawers, it did and now they won't open at all.*

*I could not get the model number because I could not get to the back and there is nothing in the front.*

*I appreciate any help you can give me on how to open this unit and where to obtain service information.*

*Ben Valle  
California*

**A:** Filing cabinet complications on fireproof cabinets are quite common. First, the lever that the customer flipped is common on better filing cabinets.

This is indeed a lock or no lock lever, which each drawer should have. This allows one to lock a cabinet with one lock (the push lock) while allowing other drawers to remain unlocked. This allows private as well as public access to the same cabinet.

The lever flips to block the action of the vertical locking bolt movement, or other blocking motion to keep the individual drawer(s) unlocked. This probably has no real bearing on why your cabinet remains locked when the push-in lock has popped out.

The cause for the lockout, not only on this cabinet, but on all file cabinets, both insulated and non-insulated, is that the lever and linkage that is activated by the push-in lock has either:



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1) Become disconnected; 2) Is stuck or bound in position by insulation or other debris (paper clips, pencils); 3) Is jammed by a drawer being pushed in improperly.

Most of these problems can be solved without too much trouble by gently shaking or jarring the linkage to try to restore free movement. This is especially hard on insulated file cabinets because of their weight and size.

Another possible method of attack is to try to run a piece of flat steel alongside the drawer to try to dislodge the linkage from where it locks into the drawer. Something is stuck which will not allow the vertical rod to move.

Once you do get the drawer and cabinet open, hopefully the problem can be solved by tightening and/or lubricating the linkage assembly. This may be especially hard on insulated files, for they were never made to be disassembled in the aftermarket situation.

\*\*\*\*\*

**Q: I have a York insulated file**

*cabinet on which the lock cylinder unlocks by itself. I would like to know how to remove the lock and repair it so it will work properly. Any information on this would be appreciated.*

*Michael P. Rafferty  
New York*

**A:** Sir, your question is somewhat ambiguous, but I will touch on some general servicing features for insulated file cabinets. If the lock is located in the drawer itself, then the front of the drawer, including the insulation can be disassembled, usually by removing a couple of locating screws and lifting up on the front of the drawer.

By doing this, the entire front of the cabinet will come off and the lock can then be removed and replaced with a modern type of lock cylinder. This is the easy one to work on.

If the lock is located in the body of the cabinet, whether on the sides or on the top, then there can be a problem. Sometimes the lock is installed, and the insulation is poured into the walls of the cabinet. If this is the case, then sometimes it is impossible to service either the lock or the cabinet linkage

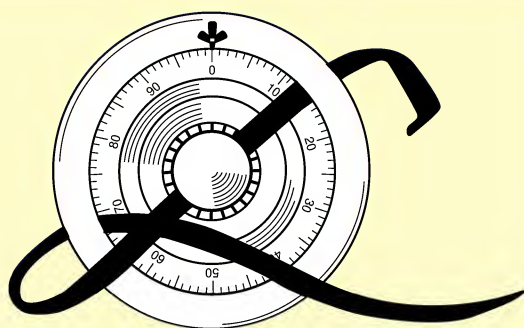
because it is encased in cement.

If this proves to be the case, or if a replacement lock is unavailable, the only thing you can do for the customer is to suggest a replacement locking system of some kind. One of the easiest to work on and install is the movable side-bar type of filing cabinet lock. This is the unit that can be purchased for a two, three, or four drawer type of cabinet.

The unit installs on one side of the cabinet and blocks the opening of the drawers when it is locked shut and fastened by either a key or combination padlock.

Remember, a filing cabinet like this is meant to give fire protection and some privacy to the customer. It is not a safe or chest, and should not be used as one. If the cabinet is to be used to store computer disks or other electronic media, be sure to point out the requirements of a "Data-Safe" and the need to keep computer materials at a temperature of below 100 degrees. Your basic insulated file cabinet or safe will not do this.

These computer elements have to be  
*Continued on next page*



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*Continued from previous page*

protected from both heat and moisture. If he needs something small, then small data containers can be put inside the insulated file cabinet. §

## Letters

*Continued from page 10*

for the younger generation of locksmiths coming up that have to jump through the hoop because of some self-serving outfit bent on strangling everybody with a bunch of bureaucratic mumbo jumbo!

With some 500 senators and congressmen who can't even agree on the Persian Gulf Crises what change will the poor locksmith have who is trying to hold his head above water, caring for his family and paying out good bucks for some course that he neither needs nor wants, plus a big license fee. Wake up fellow locksmiths and don't sell your freedom down the river!

E.H. Wilbur

## Technitips

*Continued from page 20*

tool, to depress the lock cylinder retainer pin. Depress the pin and shake the cylinder out of the lock body. The lock will still be locked, but the cylinder can be serviced without further difficulty. Open the lock with a screwdriver and install the repaired cylinder into the lock body. Repair the 1/8" hole in the lock body with a brass pin. File it smooth to conceal the repair.

David Newkirk & Randy Halberg  
Arizona

\*\*\*\*\*

To make a key for the new Ford Probe, open the passenger door and lower the window. Using your probe light, look at the top of the lock. The spring clip is mounted from the top, but there is a slot in the clip that will allow you to see the code on the lock cylinder. This saves the time necessary to remove the door cylinder to find the code. I suspect that this technique might work on Mazda autos also.

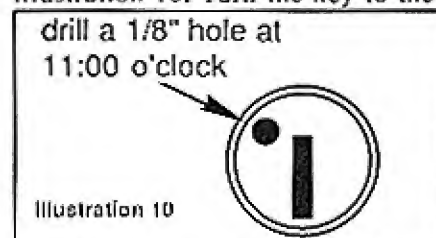
Douglas Hagstrom  
New Hampshire

\*\*\*\*\*

Here is a Technitip that will find use in more applications than just the Meilink fire chests, but for my example, here is how it works. The customer many times has a working key, but finds that it will no longer retract the

spring bolt to open the container. With this type of lockout, the locksmith must open the container and replace the defective lock. In most cases, the drive pin at the rear of the lock plug has sheared off and no amount of key rotation will ever retract the bolt. The Meilink fire chest uses a spring bolt and the usual remedy would be to drill a small hole from the side of the chest, in line with the latch bolt and force it back to open the door. The problem with this method is that it leaves a hole in the chest that must be repaired.

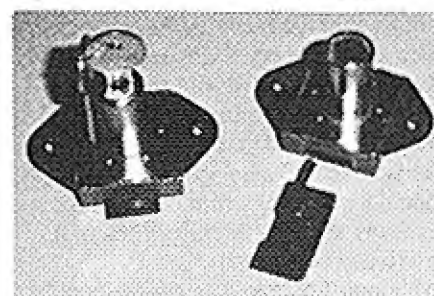
My method for opening the chest without damage is to drill an 1/8" hole through the lock plug as shown in illustration 10. Turn the key to the



locked position and leave the key in the plug. Mark, center punch and drill the plug as shown. The drill should pass through the lock plug, but stop short of drilling through the back of the lock case. (Drill approximately 1-3/4" deep.) After the hole is drilled, simply drop a probe into the hole and rotate the plug with the key to retract the bolt. The probe will act as a tailpiece, retracting the bolt.

A nose puller will not work on this lock, as it extracts only half of the cylinder, breaking it into two pieces. The bottom portion of the plug will prevent access to the lock bolt.

A replacement lock is available from Meilink. Photograph 11 shows the replacement lock, and the failed lock.



11. Replacement lock and failed lock.

R. Lazich  
Wisconsin

## HPC One

*Continued from page 37*

smooth, yet positive, and adds a degree of speed to the duplication process. When the carriage handle is pushed

*Continued on next page*

*Continued from previous page*

down the spring-loaded stop engages a notch on the shaft to hold the carriage firmly in this position.

I would like to see the thumb button of some color other than black, maybe red or green, not so much for the benefit of the operator but as a warning for curious and/or idle hands.

Our testing and evaluation of this machine was a real pleasure. We duplicated more than 50 various type keys with precision and subjected all components to our most abusive tactics, including touching the carriage release button without holding pressure on the carriage handle.

Equipment furnished with the One include a 3/4" open end wrench, various hex wrenches and tip stops. Although the One standard model is AC, it may be ordered as DC or as AC/DC for use in the shop or in a service vehicle.

For more information contact : your authorized HPC distributor or HPC Inc., 3999 N. 25th Ave., Schiller Park, IL 60176, (708) 671-6280.

## Beginner's Corner

*Continued from page 51*

head twice on the open door of the car on top. We found the foreign car section and got the door locks off a Volvo and Saab. Rick found some good locks on a Volkswagen bus. Other locks came from a Cadillac, Buick and a trunk lock from a Chevrolet. Each car was easy to identify as the year and the name were written on the doors. I got some good pictures of several doors where the panel was off and you could see all the lock mechanisms. These I will keep for future reference. There are publications of auto door openings with pictures, but sometimes the new locksmith cannot afford to buy all he needs.

Although this trip was educational, the prices at the junk yard were rather high. We spent quite a bit of time there and it was fun looking and playing with the different door and trunk lock mechanisms.

There are many state locksmith conventions that a new locksmith should attend if he can. Distance, cost and time dictates whether he can attend.



If there is a local association of locksmiths, a new locksmith has much to gain in information, by joining.

A locksmith can't possibly remember all the hundreds of things he has to know about the business. The best thing to do is keep all your reference material handy. There is an old proverb that sums up education. "You can teach a new dog old tricks!" §

### **The Lighter Side**

*Continued from page 54*

Owners and employees alike worked hard to project our new "gimmick" to our customers, and we soon were expanding our business to include decorative builders' hardware, as a result of customer requests.

Looking back, a few months later, we agreed that business had vastly improved since we had developed a theme.

"However, there is one thing I might do differently, if I had it to do over," Don confessed.

"Oh?" I asked. "What is that?"

"I keep wishing I'd tried the other gimmick, for a while."

"Really? The Batman thing?"

"No." His eyes twinkled. "I preferred, 'Why don't you come up and see me, sometime?'" §

### **Mosler**

*Continued from page 60*

leg (my name, not Mosler's). This is an important and diabolical relocking device. It springs into place when activated and is difficult at best, to release.

Photographs three and four show how the lever works. In photograph three the leg blocks the inner movement of the relocking lever. When and if the lock is punched, the cover comes off and allows the relocking lever to move into and under the combination lock which effectively locks the safe solid. This lever is spring loaded.

To add insult to injury, this lever is blocked in place by a spring loaded blocking cam. This can be seen in photograph four. Usually the relocking lever is under this cam, but as can be seen, it is locked into place.

The heads on these safes may or may not have additional hardplate. The whole safe head is hardened on top and bottom. A drill rig will be needed to penetrate this unit. Precise drilling and a borescope are needed to open this safe easily if it must be drilled. Open and Prosper! §

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